Chapter 1

Introduction to Literacy, Assessment, and Instruction
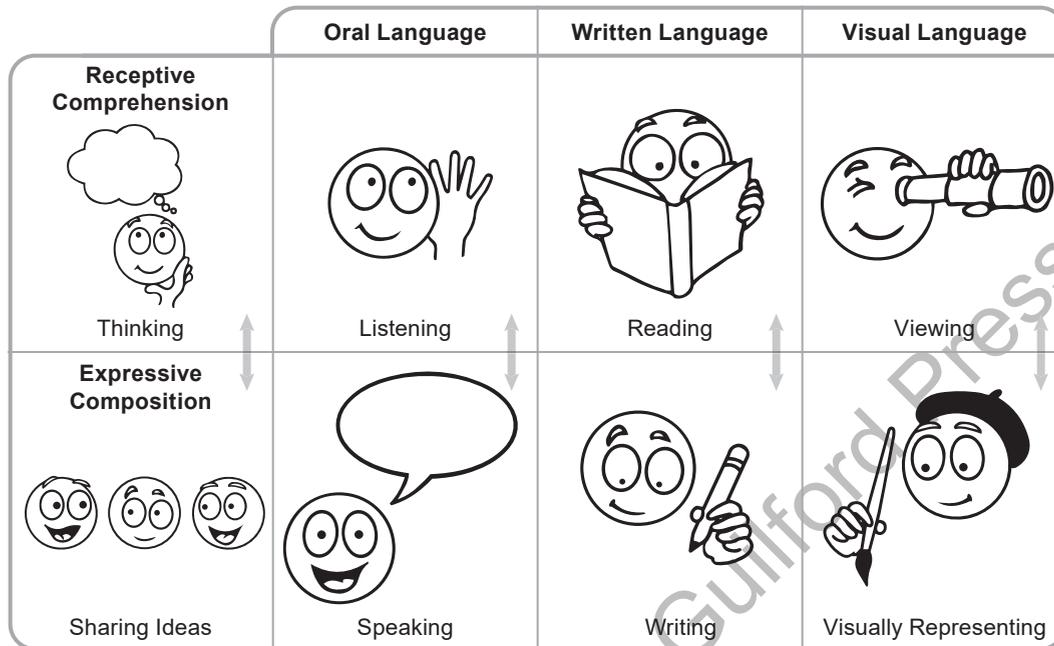
UNDERSTANDING LITERACY

The definition of literacy has evolved from an exclusive focus on reading and writing to encompass a more inclusive and expansive perspective that reflects communication in our modern and technological society. **Literacy** is the desire and ability to make and communicate meaning by listening, speaking, reading, writing, viewing, and visually representing ideas, in order to attain goals, to develop knowledge and potential, and to make a contribution to and fully participate in the community and wider society (Msengi & McAndrews, 2016b).

Literacy Modalities

There are six literacy modalities: listening, speaking, reading, writing, viewing, and visually representing. These literacy modalities are related to each other on the basis of two parameters: the medium of communication (oral, written, or visual) and the direction of communication (receptive or expressive) (Msengi & McAndrews, 2017). Communication is a two-way process; it is the responsibility of the person expressing the information as well as the person receiving the information to make sure that the ideas are clearly understood (see Figure 1.1). In one study, when teachers integrated all six literacy modalities with appropriate strategies during teaching and student learning experiences, almost all of the students were better able to understand and effectively communicate the content (Msengi & McAndrews, 2016b). Using multiple modalities also improves student engagement by providing diverse experiences and ways of representing information. The communication can take place via face-to-face interactions, electronic media, or text. While the literacy modalities are interrelated, for clarification they are defined separately here.

The **listening modality** is the active process of receiving and actively trying to comprehend the spoken and sometimes unspoken messages from the speaker's point of view.

FIGURE 1.1. Literacy modalities.

	Oral Language	**Written Language**	**Visual Language**
Receptive Comprehension Thinking	Listening	Reading	Viewing
Expressive Composition Sharing Ideas	Speaking	Writing	Visually Representing

Active listening is a process that consists of four stages: sensing and attending; understanding and interpreting; remembering; and responding (Steinberg, 2007). Sensing and attending involve the focused perception of both verbal and visual stimuli. Understanding and interpreting involve assigning meaning to and evaluating the messages received. Remembering is the storing of meaningful information. Finally, responding is demonstrating that the listener was paying attention, tried to understand, and was interested in what the speaker was saying. Responding is a way of acknowledging, clarifying, paraphrasing, summarizing, sympathizing, empathizing, and commenting about the message (Steinberg, 2007).

The **speaking modality** is the vocalized form of communicating meaning based on the syntactic combination of words. In addition, there are paralinguistic properties that can modify meaning, such as the tone and pitch of the voice, body language, gestures, and facial expressions used to communicate meaning. Sign language is a gestural form of communication often used by people who are deaf. Speech, in addition to its use in communication, can be internally used by mental processes to enhance and organize thinking in the form of an interior monologue (Vygotsky, 1978).

The **reading modality** is a complex transaction between the reader and written language, through which the reader attempts to reconstruct the writer's message while connecting the text to their background knowledge (Goodman, 1996). Reading is not just a decoding process of reading the words; it is an active process in which readers use integrated strategies to strive to understand the author's meaning while at the same time building their own meaning.

The **writing modality** is communication primarily through written words. It represents language and emotion with words in a grammatical structure and context, with the added dependency of conventions of print, including spelling, punctuation, capitalization,

paragraphs, and layout. It can allow one to communicate a message with clarity to a larger audience than through face-to-face conversations. Unlike speech, the written mode provides an opportunity to revise and correct. It is also a method of preserving records of communication.

The **viewing modality** is the comprehension of ideas and information through our eyes. It incorporates the ability to interpret, use, and appreciate images and visual media. This text focuses on three areas of visual literacy: (1) interpreting illustrations, paintings, and photographic images; (2) reading and analyzing graphical devices such as maps, charts, graphs, diagrams, three-dimensional models, and realia; and (3) interpreting digital, video, and multimedia presentations as well as performance arts.
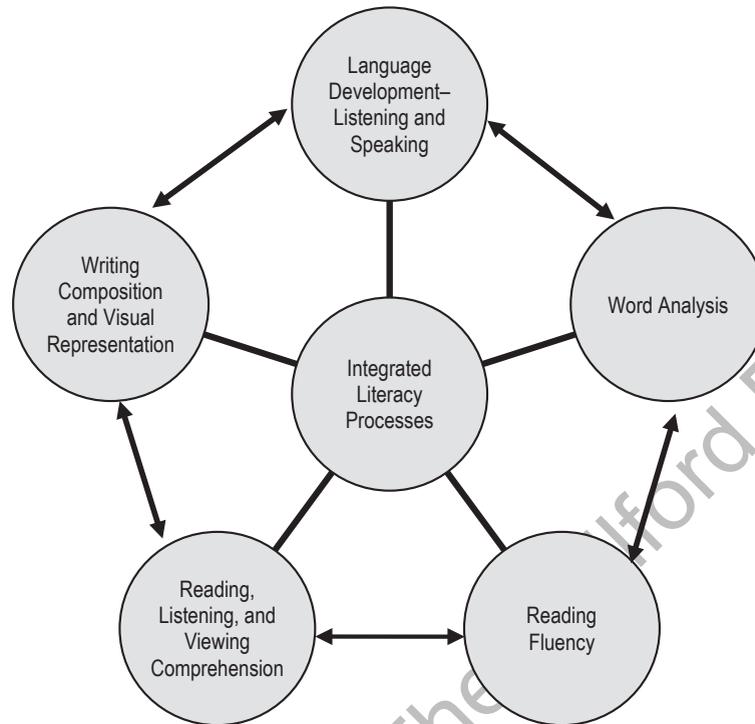
The **visually representing modality** is the communication of ideas and information through the creation and sharing of two- or three-dimensional, static or moving visual images. The creator needs to consider how the visual elements and principles of design are used together to communicate meaning. Visual media often contain additional information that is not included in, but is supported by, accompanying written or oral text.

Literacy Processes

Literacy, as conceptualized in this text, includes multiple integrated processes such as language development (listening and speaking); word analysis (phonological awareness, the alphabetic principle, word identification, spelling, and emergent text concepts); reading fluency (word accuracy, phrasing, expression, intonation, and pace); reading, listening, and viewing comprehension; and writing composition and visual representation (see Figure 1.2). Although the assessment and development of each of these processes is described in separate chapters, it is important to note that these are not discrete processes, but are interrelated and dependent on the knowledge of the other processes. Language development, both in and out of school, plays an important role in the comprehension and composition of ideas, and therefore language is the first process to be addressed.

Literacy development begins at birth and continues throughout one's lifetime. **Emergent literacy** is a gradual process that takes place over time from birth until a child can read, write, and communicate in what is considered to be a "conventional" sense— a term coined by Marie Clay (1993). **Advanced literacy** or **full literacy** is the ability to apply critical analysis, inference, and synthesis to oral, written, and visual material, and then to communicate with accuracy and coherence, as well as to use information and insights as the basis for informed decisions and creative thought. As adults, while we have strengths in some areas of literacy, we continue to develop our literacy processes and knowledge.

Historically, teachers were taught the importance of incorporating **content area literacy,** which focuses on study skills that can be used to help students learn from disciplinary texts (Shanahan & Shanahan, 2012). While this may be important, it is not sufficient. Students need a much more in-depth understanding of applying literacy in the content areas, now referred to as disciplinary literacy. **Disciplinary literacy** is the "specialized knowledge and abilities possessed by those who create, communicate and use knowledge within each of the disciplines" (Shanahan & Shanahan, 2012, p. 7). Learners need to do much more than just understand the information in textbooks. For example, if they are in a scientific field, they need to learn how to gather information from other experts, collect data, analyze data, and draw conclusions; then they need to communicate their findings

FIGURE 1.2. Literacy processes.

orally, visually, and in written form in order to persuade others to think differently. Therefore, there has been a philosophical shift from teaching content area literacy to teaching disciplinary literacy. Each field has its own type of literacy, such as digital literacy, media literacy, data literacy, mathematical literacy, scientific literacy, critical literacy, civic literacy, and musical literacy, to name a few.

As educators, it is our job to understand our students' current strengths, needs, and interests; to differentiate our instruction; and to develop their enthusiasm for learning during meaningful and authentic literacy experiences. While many of the careers and interests that our students will pursue in the future may not have been developed yet, we can prepare them by giving them opportunities to inquire and apply literacy and problem-solving strategies while collaborating with and learning from others.

Literacy from a Linguistic Perspective

Literacy is based on a foundation of linguistics. **Linguistics** is the study of language and its structure, and involves an analysis and integration of phonetics, morphemics, syntactics, semantics, and pragmatics. **Phonetics** is the study of speech sounds. **Morphemics** or morphology is the study of the formation of words, while **syntactics** or syntax is the study of the formation of sentences. **Semantics** is the study of meaning, and **pragmatics** is the study of language use. In sociolinguistics, which overlaps with pragmatics, there is an emphasis on the effect of society on the way language and literacy are understood and communicated. When these linguistic elements are combined with **orthography**, the writing system

of a language, literacy is developed and enhanced. Both teachers and students need to understand explicitly how language and literacy work (Hudson, 2004). A deeper understanding of language is necessary for its intellectual benefits, as it improves the language skills of reading, writing, speaking, and listening (Hudson, 2004). Language and literacy are mostly learned from experience of usage in the interaction with others.

Social-Constructivist and Sociocultural Theories

The learning theories that teachers hold implicitly or explicitly influence their teaching, learning, and assessment practices (Scarino & Liddicoat, 2009). This text is based on the philosophy that teaching and learning are socially constructed, sociocultural, and multimodal literacy-based processes. In **social constructivism**, knowledge is individually constructed and socially mediated through the interaction with others. "Language and culture are frameworks through which humans experience, communicate, and understand reality" (Vygotsky, 1978, p. 39). Instruction should focus not only on how adults and peers create a community of learners that influence individual learning (Vygotsky, 1978), but also on how cultural beliefs and attitudes influence how instruction and learning should take place (Freire, 1970). Teachers should provide collaborative, authentic learning experiences that incorporate and value each student's **funds of knowledge**—the knowledge, skills, and experiences that are acquired through interactions in their community, family life, and culture (Gonzáles, Moll, & Amanti, 2005).

Teachers need to consider both what learners are able to do independently and what they can do with the support of social interaction. According to Vygotsky (1978), an individual's learning potential depends on mediation or the learning supports made available, such as reminders, examples, models, graphics, explanations, questions, elaborations, and specific feedback of strengths and areas for improvement. A sociocultural approach to teaching and learning is one that values and incorporates a learner's prior experiences, social participation, and use of mediating devices (language, tools, and technologies) within the context of authentic experiences (Scarino & Liddicoat, 2009). The final theory is that literacy—especially disciplinary literacy—is a multimodal process integrating not only oral and written literacy, but visual literacy (Msengi & McAndrews, 2016b). In our changing world of technology, we need to attend more to comprehending and representing visual information, and to the cultural importance of the visual and performing arts. A goal of this text is to develop supportive, culturally, and linguistically responsive educators who advocate for all students and facilitate their learning with the resources and strategies they need to be lifelong learners, informed decision makers, and successful citizens in our world.

UNDERSTANDING ASSESSMENT

Assessment is the process of gathering both qualitative and quantitative data about attributes of student learning and teaching through tests, observations, work samples, interviews, self-reflection, and other means. It is important to understand and communicate to others the purposes and types of assessment, possible ways to analyze the assessment data, and the implications for instructional decisions based on these data. Assessment evaluates not only the student's learning, but the teacher's instruction.

Assessment for, as, and of Learning

There are three purposes of assessment: assessment *for* learning, assessment *as* learning, and assessment *of* learning (Cooper, 2006). In addition, there are different types of assessments: norm-referenced, criterion-referenced, curriculum-based, and performance-based.

Assessment for learning, also known as **formative assessment**, is the process of gathering and analyzing data before and during teaching to identify what students know and can demonstrate, and what misconceptions they may have. Assessment for learning provides opportunities for the teacher to share the criteria for learning expectations and to provide specific oral and written feedback based on those learning expectations. This ongoing information is used by teachers to adjust or differentiate their teaching. Students are usually aware of what they are expected to learn and what the criteria for the assessment are. Often these assessments examine the students' processes of learning, not just the products. Assessment during the process of learning shows the students their strengths and needs, as well as their amount of change or development during the completion of a task.

Assessment as learning occurs when students assess themselves and their peers throughout the learning process and create learning goals. Students analyze their performance, or that of their peers, on the basis of specified criteria; they identify their strengths and areas for improvement, and determine how they can enhance their learning (Abromeit, 2001). Students use metacognitive strategies to monitor their own learning, identify what they know and can do, ask questions, and use feedback and self-assessment to help them in the next steps in learning. Ross (1998) suggests that in order to support self-evaluation, educators involve their students in defining the criteria to judge their performance, teach them how to apply the criteria to their own work, give them feedback on their self-evaluations, and help them develop productive goals and action plans. Several of the assessments in this book are specifically designed for peer and self-assessment. When students become involved in the learning process, they gain confidence in understanding what they are expected to learn and to what standard.

Assessment of learning, or **summative assessment**, takes place at the conclusion of instruction or at the end of a learning unit. It provides information and feedback about what was learned. The assessment should match the goals and objectives for student learning. This type of assessment assesses the product of what each student has learned and evaluates the student's learning based on standards. Assessment of the product becomes more meaningful for students when they are not only aware of the steps of the process to complete the task, but also when they are aware of evaluation criteria ahead of time.

Types of Assessment

Norm-referenced assessments are broad measures of achievement; they compare a student's performance to that of a national or representative sample of same-age or same-grade students. The tests are generally administered to groups. The format tends to have more traditional question structures, such as multiple-choice. Norm-referenced reports include a variety of numeric or quantitative data, such as percentile ranks, stanines, grade equivalent scores, raw scores, and scaled scores. A p**ercentile rank** identifies the percentage of a student's peer group (age or grade level) who took the assessment that the student's score surpassed. A **stanine** is a standard score representing a range of scores within an interval in a nine-point scale, with a mean of five and a standard deviation of two. **Grade and age equivalent scores** are estimates of the performance that an average student at

a grade or age level is assumed to demonstrate. However, they can be very misleading because the scores are not stable and the standard changes by grade or age. Students may be one to two grade levels below their actual grade level and still be in the average range. A **raw score** is the number of correct responses on each subtest. A **scaled score** is a conversion of a student's raw score on a test to a common scale that allows a numerical comparison between students.

Norm-referenced achievement tests are often used as institutional assessments to provide the school boards, school administrators, and the general public evidence of the effectiveness of school programs at the curricular and programmatic levels. Examples of norm-referenced assessments (current at the time of this writing) are the *Woodcock–Johnson IV Tests of Cognitive Abilities* (Schrank, McGrew, & Mather, 2014), the *Gates–MacGinitie Reading Tests* (Nelson Assessment, 2017), the *Iowa Assessments* (University of Iowa College of Education, 2019), and the *Stanford Achievement Test* (Pearson, 2010). Results are measured against the stated missions of a school or specific program within them (Gunning, 2004). In the past, the primary means of identification for placement in special education was comparing the results of an intelligence test with a standardized achievement test. Now teachers must demonstrate that a significant amount of intervention was provided prior to testing or placing a child in special education. The data from these norm-referenced tests can complement other forms of assessment; however, they often only provide general information, such as approximate achievement level or expected level of achievement. They often do not measure literacy the way it is taught or used; therefore, this text does not cover the administration of norm-referenced tests.

Both norm-referenced and criterion-referenced tests must be reliable and valid (Gunning, 2004). **Reliability** is a measure of the consistency and dependability of results if students repeat the test. **Validity** is the degree to which test scores appropriately reflect the level of knowledge and skills that a test is designed to measure. Effective tests must also have **content validity**, meaning that they measure skills and strategies in the same way in which they were taught.

Criterion-referenced assessments are measures of student performance against a defined set of learning requirements or expectations. Most criterion-referenced tests measure knowledge, skills, and abilities as defined in learning standards or curricula developed by state educational agencies or school districts. The test results are reported in terms of what a student knows or is able to do as compared to each defined criterion. Therefore, these tests are more useful for making instructional decisions than norm-referenced tests, where the scores are compared to other students. Criterion-referenced tests often use "passing" or "cut" scores to place the students into categories such as basic, proficient, and advanced. Weaknesses of some criterion-referenced tests is that they may have arbitrary cut scores, may not include qualitative data (such as what the student understood) or an analysis of mistakes, and may not assess literacy skills or strategies in an authentic manner. Some tests use brief passages and multiple-choice tests, such as those found in many basal reader tests or technology-based assessments (Gunning, 2004). Another type of criterion-referenced test is an **informal reading inventory**, in which students read complete passages and are evaluated based on an analysis of their word accuracy, cue and strategy use, retelling, and free response to comprehension questions. This analysis can provide placement levels for reading instruction, as well as identify strengths and needs to inform instruction.

Diagnostic assessment, a specific type of criterion-referenced assessment, allows for an in-depth analysis of a student's current knowledge, skills, and strategies in order to gain an understanding of the student's literacy processes. Predominantly qualitative data

on students' specific strengths and areas for growth help teachers identify specific objectives to be taught and how to teach them. A teacher can reinforce a student's strengths and background knowledge and use it to help the student make connections to new learning. An analysis of the student's specific miscues or mistakes, and patterns of mistakes, provides windows into the student's thinking, so that the teacher can clarify misconceptions through constructive feedback. An informal reading inventory with an analysis of miscues, oral reading strategies, and comprehension elements is an example of a diagnostic assessment, along with most of the assessments in this book.

Curriculum-based assessment, also called **curriculum-based measurement (CBM)** or **progress monitoring**, is the repeated, direct assessment of targeted skills to monitor student process in areas such as reading, spelling, writing, and math. The assessments are designed to used material from the curriculum to measure student mastery. Benchmarks of progress are defined and assessed on a regular, ongoing (often weekly) basis. Administration of each measure typically takes 1–5 minutes. Quantitative data are usually displayed graphically to allow monitoring of student performance according to benchmarks. Some of these assessments, such as the *Fountas and Pinnell Benchmark Assessment and Scholastic Inventories*, provide opportunities to read from and respond to authentic texts; others, such as AIMSweb (2006), assess isolated skills such as the number of words read or spelled correctly in 1 minute. Although these timed tests of isolated skills are easy to give and easy to report their scores to the public, they generally do not provide any qualitative data for specific analysis of a student's strengths and areas for growth, which would be required to plan appropriate individualized instruction.

Performance-based assessment or **authentic assessment** measures students' ability to apply higher-order thinking skills and knowledge learned in class or from their experiences to perform, create, or produce something with transferable real-world application. Students demonstrate what they know and are able to do, and the quality of their performance is evaluated on the basis of specific criteria. This type of assessment emphasizes the process of how students learn, rather than just the product of what students learned (Gunning, 2004). Running records (Clay, 1993), miscue analysis (Goodman, 1987), oral and written retellings, think-aloud protocols, analysis of written compositions, observations, anecdotal records, checklists, rating scales, and rubrics are used to evaluate students' literacy development. To determine students' interests, attitudes, and beliefs, teachers can use questionnaires and interviews. Self-evaluation, another form of authentic assessment, is of critical importance because students reflect on their own learning, put together portfolios of their own work, and make goals and plans for future learning. These self-evaluations can include the students' using checklists, rubrics, logs, journals, conferences, and literacy development portfolios to evaluate their own learning. This text includes a variety of criterion-referenced and performance-based assessments because they provide not only ongoing quantitative data (such as reading levels), but, more importantly, qualitative data on how each student processes language, reading, writing, and visual information.

Deciding on Appropriate Assessments

No single assessment tool will meet all of the learning goals and suit the learning styles of every student. Multiple assessment tools need to be used to identify students' strengths and areas for growth to make instructional decisions. As an educator seeking to choose the right assessment, you need to ask yourself the right questions:

- Does the assessment align with your teaching goals and philosophy?
- Does it measure what you are currently teaching? Does it align with the current learning objectives, or does it keep testing the same battery of skills even if they were not recently taught?
- Does it measure what it says it measures? For instance, if you want to measure reading comprehension, does the assessment focus on identifying the main idea of the passage, understanding vocabulary in context, making inferences, and identifying the author's purpose, or does it simply assess the ability to select a word to fit in a sentence and call this "reading comprehension"?
- Does it measure what is important? For example, if you want to measure reading and the purpose of reading is comprehension, then comprehension must be assessed. Since students do not need to read and write nonsense words, then this skill should not be assessed.
- Does the assessment provide both quantitative and qualitative data about students' specific strengths and areas for growth?
- Can incorrect responses be analyzed to identify patterns of thinking or misconceptions?
- How will the assessment information be used to inform the next teaching and student learning experiences?
- Does it assess higher-order thinking or just rote memorization?
- Does the assessment match student's skill or developmental levels? Was the student successful with much of the assessment, or was the student at the frustration level and continues to be tested at this level?
- Does the assessment match the students' language and cultural knowledge? Are the students English language learners? Are the assessment items related to concepts that are unfamiliar in their culture or experiences?
- How frequently should the same assessment be given? What new strategies or information has been taught since the last assessment that indicates another administration would be beneficial?
- What impact does the amount of time given for responding to the assessment items have on students' learning and anxiety? Is the emphasis on processing speed or on whether a student can use thinking strategies to respond accurately?

UNDERSTANDING INSTRUCTION

The purpose of **instruction** is to help people learn and to transfer and transform their learning through the use of metacognitive strategies in order to problem-solve and communicate ideas to others. Metacognition allows students to apply, monitor, and regulate strategy use; develop insight into how they learn with their own strengths and weaknesses; and use this insight to improve their learning (Flavell, 1979). **Learning** is a continuous process of gaining knowledge and skills through experience, interaction with others, study, and being taught. Teachers should encourage **student-centered learning** by involving them in decisions during planning, implementation, and assessment. What students learn, how they learn it, and how their learning is assessed are all driven by the students' needs and abilities, as well as their interests. Students should have opportunities to lead and share their learning with others.

Gradual-Release-of-Responsibility Model

The **gradual-release-of-responsibility model**, developed by Pearson and Gallagher (1983), shifts the responsibility of learning from the teacher to the eventual independence of the learner. This is accomplished through instructional scaffolding, based on Vygotsky's concept of the zone of proximal development (to be discussed later). There are four phases in the gradual-release-of-responsibility model: At first the responsibility rests predominantly on the teacher, with focused instruction and guided instruction; it is then gradually shifted to the student, with collaborative learning and independent learning (Fisher & Frey, 2014).

- **Focused instruction:** "I do it." The teacher explains the lesson purpose, introduces the topic in context, models the strategies and skills with a think-aloud, and notices how students respond.
- **Guided instruction:** "We do it." In small instructional groups, the teacher guides students toward using different skills, strategies, and procedures independently, by providing prompts, questions and specific feedback on strengths and areas for growth.
- **Collaborative learning:** "You do it together." Students work in small groups on activities that allow them to deepen their understanding through exploring, problem solving, discussion, and thinking with their peers.
- **Independent learning:** "You do it alone." Students use the skills and knowledge they acquired to demonstrate their learning and pose new questions.

Guidelines for teaching strategies, skills, or tasks within the gradual-release-of-responsibility model (modified from Fisher & Frey, 2014) are as follows:

- Name the strategy, skill, or task.
- State the purpose of the strategy, skill, or task.
- Provide a context and authentic purpose for using it.
- Explain when the strategy or skill is used.
- Use analogies to link prior knowledge to new learning.
- Demonstrate how the skill, strategy, or task is completed, using multiple modes of oral, written, and visual communication.
- Explain and identify each step with criteria for acceptability. Give examples of correct and incorrect responses.
- Alert learners about possible misconceptions or errors to avoid.
- Provide guided instruction with feedback based on the criteria.
- Provide collaborative learning with feedback based on the criteria.
- Provide independent task and assess the use of the new skill in context.
- Promote student self-monitoring.
- Reinforce this strategy in future lessons and literacy experiences.

Whole–Part–Whole Instruction

Students benefit more from instruction when strategies and skills are not taught in isolation, but are framed in the **whole–part–whole** instructional methodology (Knowles,

Holton, & Swanson, 2015; Strickland, 1998). In this methodology, the teacher introduces the "whole" or how the learning is applied in context; students practice the "parts"; and then the students recombine the parts and apply them in a new context or "whole." Here is an example:

Whole: The teacher states that the objective is to read and write words with the *-ea* vowel digraph. The teacher starts by reading an authentic story that contains the preferred vowel digraph. The students next use the think–pair–share approach to arrive at the definition of a vowel digraph, and then highlight the words in the story containing the vowel digraph *-ea*.

Part: Students sort the words by sound: /ē/, *eat*; /ĕ/, *bread*; /ā/, *great*. They read the words. Next, they write and read additional words with the same sounds and spelling patterns.

Whole: Students write their own stories, using at least three words with each of the sounds of the *-ea* vowel digraph. They then highlight the words with the *-ea* vowel digraph, and read their stories aloud to the group.

Elements of Effective Instruction

There are five elements of effective instruction that, when integrated into learning experiences, foster students' engagement with the goal of improving their outcomes and achievement (Great Schools Partnership, 2018).

1. Create a learning environment that supports all students to take risks, ask questions, and make and learn from mistakes. The physical space, routines/procedures, and development of positive relationships constitute a physically, socially, and emotionally safe environment.

2. Identify and share clear outcomes that anchor and guide the choices of instructional activities, materials, practice assignments, and assessment tasks. Outcomes are understood and used by students to set goals, guide learning, and prompt self-reflection.

3. Provide varied content, materials, and methods of instruction, so that students can explore ideas and information in varied ways and access learning through multiple entry points. Teachers select content and materials to engage and meet the needs of all learners.

4. Provide students with opportunities to practice what they are learning, and give timely, specific feedback based on their current performance in relation to the desired outcomes.

5. Coach and teach students to engage in higher-order thinking through instructional activities and practice.

During instruction, teachers need to **actively listen** by paraphrasing, checking perceptions, questioning, and soliciting elaboration; **pause** to allow students to process information; **prompt** students to use literacy and learning strategies; and **probe** students to monitor their learning, internalize strategies, and check for understanding. The design of curriculum, instruction, and assessments should prompt complex thinking, integration of concepts and ideas, and transfer of learned skills to new material or novel situations.

Instructional Design

Instructional design is based on a variety of constructs, such as backward design, diagnostic teaching, zone of proximal development, Bloom's taxonomy of cognitive levels, Camborne's model of literacy development, and lesson frameworks such as those developed by Fountas and Pinnell.

Backward Design

Backward design is the planning of instructional/learning experiences with the final outcome and assessment in mind. Wiggins and McTighe (2005) have identified three stages of backward design:

1. Identify desired results. To establish goals, big ideas, and skills, ask, "What do I want students to understand, know, and be able to do?"
2. Determine acceptable evidence of learning. To gather assessment evidence, ask, "How will I assess their learning during and after the task?"
3. Plan learning experiences and instruction. To plan learning events, ask, "Which learning activities will lead students to the desired results?"

Diagnostic Teaching

In planning instruction, it is also necessary to understand diagnostic teaching. **Diagnostic teaching** is the process of "using assessment and instruction at the same time to identify the instructional modifications that enable readers (and writers) to become independent learners" (Walker, 2011, p. 5). It is important to include formative assessment throughout the learning process, not just summative assessment at the end.

Zone of Proximal Development

To motivate and encourage learning, materials and learning experiences should be within a student's zone of proximal development. The **zone of proximal development**, as defined by Vygotsky (1978, p. 86), is "the distance between the actual developmental level as determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers." In other words, instruction should take place at a level at which the student is able to do the task successfully with some scaffolding (see Figure 1.3).

Bloom's Taxonomy

As educators, our primary goal is to develop our students' knowledge and problem-solving abilities by providing experiences that enhance their higher-order thinking. Bloom (1956) developed a method of classification for thinking behaviors that were believed to be important in the processes of learning, known as **Bloom's taxonomy**, with six hierarchical levels of cognitive complexity. From lowest to highest, these six levels are knowledge, comprehension, application, analysis, synthesis, and evaluation. Many educational objectives and strategies have been based on this taxonomy.

FIGURE 1.3. Chart illustrating levels below, within, and above the zone of proximal development.

Below the zone of proximal development ←	Within the zone of proximal development ←	Above the zone of proximal development
Independent level—Easy	Instructional level—Just right	Frustration level—Too hard
Student can read, write, communicate, or complete task on his/her own.	Student can read, write, communicate, or complete task with support.	Student is unable to read, write, communicate, or complete task even with support.

According to Forehand (2005), although teachers have used Bloom's taxonomy since the late 1950s to encourage students to use higher-order thinking, a former student of Bloom's, Lorin Anderson, led a new group of cognitive psychologists, curriculum theorists, and instructional researchers to update the taxonomy. These scholars felt that the original taxonomy did not reflect the depth of knowledge. This revision, which is available in complete and abridged editions (Anderson & Krathwohl, 2001), includes several changes in terminology and structure, which permit its broader use as a tool for planning, instruction, and assessment. The terminology of the six categories has been changed from nouns to verbs; the top two levels have been switched; and the bottom level has been renamed. Forehand describes the structural changes from the original one-dimensional form to the revised two-dimensional form. The knowledge dimension examines the kind of knowledge to be learned, while the cognitive process dimension examines the process used to learn. The knowledge dimension has four levels: factual, conceptual, procedural, and metacognitive. The cognitive process dimension has six levels: remembering, understanding, applying, analyzing, evaluating, and creating. In addition, each of the four knowledge dimension levels is subdivided into either three or four categories; for example, the factual dimension is divided into factual knowledge, knowledge of terminology, and knowledge of specific details and elements. Forehand explains that the subcategories are most helpful to teachers in both writing objectives and aligning standards with the curriculum. They are also helpful in assessing students throughout the learning process. Table 1.1 describes the revised taxonomy's cognitive processes, verbs for objectives, and correlated assessments for learning.

Cambourne's Model of Literacy Development

An effective model of literacy learning, developed by Cambourne (1988), demonstrates how literacy development occurs. Students are engaged in literacy when they have been immersed in it and have had numerous demonstrations of how texts are constructed and used. Teachers should maintain high but achievable expectations; however, the responsibility of learning remains with the students. Students need numerous opportunities to use their developing literacy processes. Teachers should expect and allow approximations, as this is how learning occurs. Finally, students need to receive specific, timely, and constructive feedback. When these elements are in place, learners are likely to continue to engage in literacy activities for their own purposes. In Cambourne's model, there are seven conditions in planning instruction: (1) immersion in the content and context, (2) demonstration of practical and concrete models, (3) clear description of learning expectations, (4) striving for students to take responsibility for their own learning, (5) recognition of approximations

TABLE 1.1. Revised Bloom's Taxonomy

Cognitive process	Verbs for objectives	Assessment
Creating	*assemble, construct, create, design, develop, formulate, compose, invent, generating*	Can the student put elements together to create a new product, idea, or point of view?
Evaluating	*appraise, argue, defend, judge, select, support, critique, evaluate, justify, recommend, conclude*	Can the student make and support judgments based on criteria?
Analyzing	*compare, contrast, differentiate, experiment, predict, categorize, separate, relate, analyze*	Can the student distinguish between different parts and determine how the parts are related to each other and to the overall structure?
Applying	*demonstrate, dramatize, act out, illustrate, interpret, solve, use, infer, show*	Can the student use the information in a new way or context?
Understanding	*classify, describe, explain, discuss, identify, locate, report, select, paraphrase, translate, summarize, arrange, give examples.*	Can the student construct meaning for oral, written, and visual information to explain the ideas or concepts?
Remembering	*define, list, memorize, recall, repeat, state, label, match*	Can the student recall relevant information from long-term memory?

toward learning expectations, (6) opportunities for practice and application of new learning, and (7) providing continuous feedback, support, and celebrations.

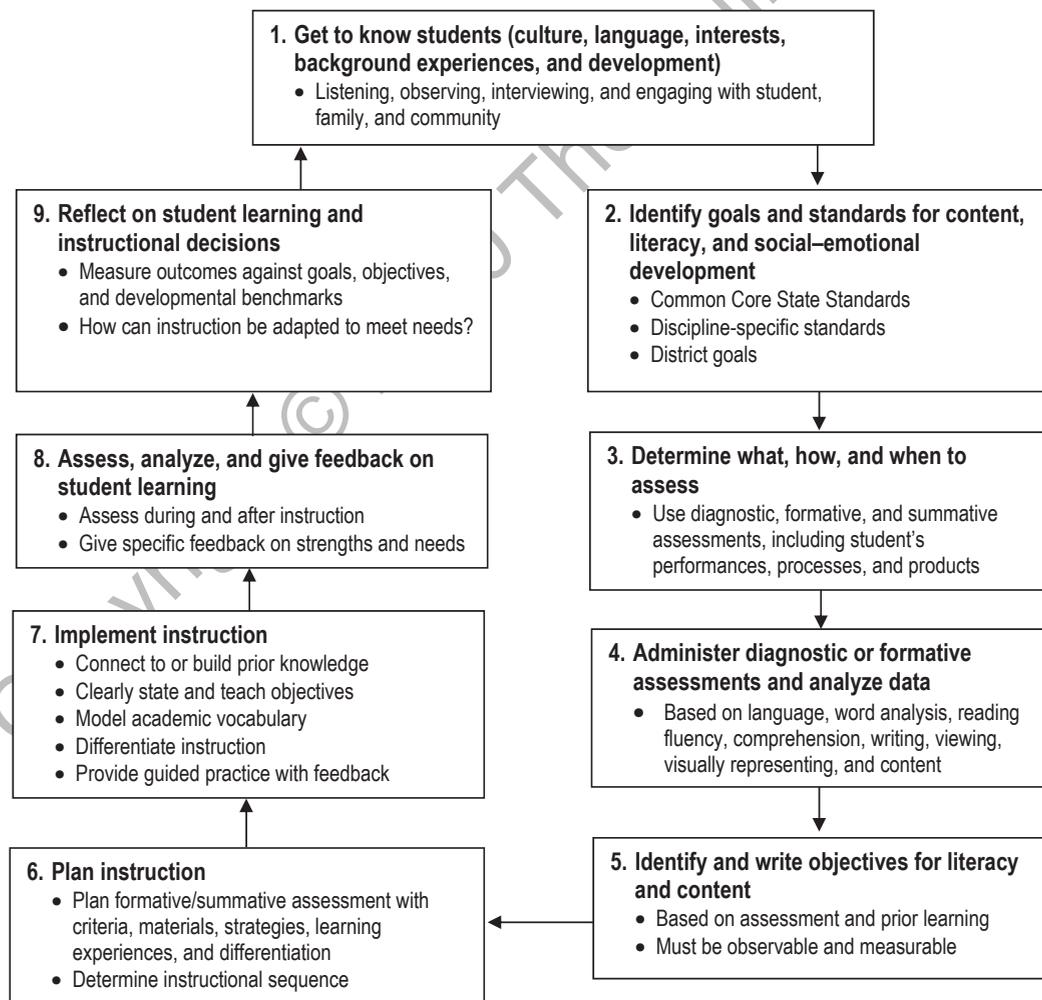## *Fountas and Pinnell's Continuum of Literacy Learning*

Effective instruction comes from careful planning of the entire literacy program. Pinnell and Fountas (2010) have developed a continuum of literacy learning that contributes to students' literacy development and can be used to design and manage the instructional program. This continuum consists of the following seven curriculum components (Pinnell & Fountas, 2010, p. 3):

- **Interactive read-aloud and literature discussion:** Students engage in deep discussion with one another about a text that they have heard read aloud or one they have read independently.
- **Shared and performance reading:** Students read together or take roles in reading a shared text. They reflect the meaning of the text with their voices.
- **Writing about reading:** Students extend their understanding of a text through a variety of writing genres and sometimes with illustrations.
- **Writing:** Students compose and write their own examples of a variety of genres, written for a variety of purposes and audiences.
- **Oral, visual, and technological communication:** Students present their ideas through oral discussion and presentation or through the use of technology.
- **Phonics, spelling, and word study:** Students learn about the relationships of letters to sounds, as well as the structure of words, to help them in reading and spelling.
- **Guided reading:** Students read a teacher-selected text in a small group; the teacher provides explicit teaching and support for reading increasingly challenging text.

UNDERSTANDING THE CYCLE OF DECISION MAKING
FOR ASSESSMENT AND INSTRUCTION

Teachers need to make many important decisions about assessment and instruction in order to enhance their students' literacy development and lifelong learning. "Assessment and instruction should be inextricably linked in a recursive, ongoing, and dynamic way" (Vogt & Shearer, 2007, p. 91). Paris and colleagues (1992) have developed phases of decision making for authentic literacy assessments; these include identifying dimensions of literacy, identifying attributes of literacy, collecting evidence of literacy proficiency by various methods, scoring student work samples, and interpreting and using the data. In a different model, Walker (2011) has identified five roles of diagnostic teachers: reflecting, planning, mediating, enabling, and responding. The **cycle of decision making for assessment and instruction** my colleagues and I follow, which is based on multiple models, includes nine integrated phases (see Figure 1.4). Each phase is described in detail on the following pages. These decision-making phases are important so that the instruction can be based on each

FIGURE 1.4. Cycle of decision making for literacy assessment and instruction.

1. **Get to know students (culture, language, interests, background experiences, and development)**
   - Listening, observing, interviewing, and engaging with student, family, and community

2. **Identify goals and standards for content, literacy, and social–emotional development**
   - Common Core State Standards
   - Discipline-specific standards
   - District goals

3. **Determine what, how, and when to assess**
   - Use diagnostic, formative, and summative assessments, including student's performances, processes, and products

4. **Administer diagnostic or formative assessments and analyze data**
   - Based on language, word analysis, reading fluency, comprehension, writing, viewing, visually representing, and content

5. **Identify and write objectives for literacy and content**
   - Based on assessment and prior learning
   - Must be observable and measurable

6. **Plan instruction**
   - Plan formative/summative assessment with criteria, materials, strategies, learning experiences, and differentiation
   - Determine instructional sequence

7. **Implement instruction**
   - Connect to or build prior knowledge
   - Clearly state and teach objectives
   - Model academic vocabulary
   - Differentiate instruction
   - Provide guided practice with feedback

8. **Assess, analyze, and give feedback on student learning**
   - Assess during and after instruction
   - Give specific feedback on strengths and needs

9. **Reflect on student learning and instructional decisions**
   - Measure outcomes against goals, objectives, and developmental benchmarks
   - How can instruction be adapted to meet needs?

learner's strengths and areas for growth, rather than on a predetermined instructional sequence in a program.

Phase 1. Get to Know Students

In order to plan how to teach students, a teacher needs to know what motivates and interests them, and what background experiences or funds of knowledge they bring to the classroom. Students' learning is also influenced by their peers, family, and community, as well as by their culture, language(s), and level of development. When teachers understand students, they are better able to help them make connections to prior knowledge in order to make the learning relevant and interesting. Teachers can learn from their students by listening to them, observing them, interviewing them, and engaging with them and their family and community. Specific strategies for doing these things are described in Chapter 2. Teachers can also learn about students' personal goals for learning and the ways in which certain teaching practices help or hinder their learning.

Phase 2. Identify Goals and Standards

Educational goals and standards are statements describing the competencies, skills, and attributes that students should possess at the completion of a class, grade, or educational level. A broad goal of PreK–12 education may be to facilitate all students in graduating from high school with the academic, sociomotional, and lifelong learning skills to be responsible and caring citizens, leaders in their community, and agents of their own success. Educational learning standards, such as the Common Core State Standards (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010; *www.corestandards.org*) and the Next Generation Science Standards, are written descriptions of what students are expected to know and be able to do at a specific stage in their education.

In addition to national learning standards, there may be state and district goals for what students should be able to know and do by the end of each grade.

Phase 3. Determine What, How, and When to Assess

Teachers select assessments that are useful to support students' learning, and assess what students are expected to know and do. Knowledge about a student's literacy and content proficiency can be obtained through individual or group assessments, as well as information from the student, the family, classroom teachers, classroom assistants, and other professionals. Evidence of content and literacy development can be obtained through multiple diagnostic, formative, and summative assessments. Students' performances, processes, and products can all be evaluated.

Evidence of a student's learning should be collected throughout the year and should be organized in a student's literacy learning portfolio. These data could include diagnostic assessment, performance-based checklists, and rubrics; self-evaluation interviews; and observation notes. At the end of each grading period or semester, specific literacy assessments can be readministered in order to evaluate and identify new literacy strengths, other improvements, and ongoing needs.

The choice of a specific assessment should be based on its relation to the stated goals and objectives. When possible, assessments should use authentic oral language, reading,

and writing tasks. The assessment should provide evidence of specific literacy strengths and needs, and not just general levels and scores. Discretion is needed in selecting assessments or literacy experiences, so that the most information is gained from the fewest tasks. This allows more time for learning and less time assessing. In addition, these tasks should be within or close to a student's zone of proximal development. That is, the student is expected to complete at least part of the task correctly, but the student may not have the prior knowledge necessary to complete the task with 100% accuracy. If the student becomes too frustrated or can complete the task too easily, the literacy task may need to be stopped, and another one can be given that will be more appropriate.

The assessments included in this book are organized by specific literacy processes. The *Purposes for Assessments* chart in the Appendix (p. 357–358) provides a list of the assessments, along with their purposes and which students should benefit from them. Within each chapter, there are directions for how to administer each assessment. Some assessments include cut scores that indicate where to stop, as well as directions for continuing to higher levels.

Phase 4. Administer Diagnostic or Formative Assessments and Analyze Data

The following general assessment procedures are used for administering the literacy assessments described in Chapters 3–7 and included in the Appendix (language, word analysis, reading fluency, comprehension, and writing/visual assessments). For specific instructions, see the directions for the individual assessments.

First, as the teacher, obtain background information about each student's language and literacy development from family members, classroom teachers, and all other involved professionals to help guide the selection of assessments. You also need to determine if your students with visual, auditory, or other physical differences need any accommodations. Next, select those assessments that will provide the information needed to guide your instruction. Obviously, not all assessments need to be administered to every student; the decisions are based on developmental benchmarks, prior knowledge of each student's literacy development, and an analysis of each assessment after it is administered.

Prepare the environment for assessment. If possible, the assessments should be administered individually in a quiet, separate room in order to reduce distractions. You should usually sit next to and slightly behind the student being assessed, and hold a clipboard containing all record sheets. In this arrangement, your interactions are more conversational, you can more easily observe the student's behaviors, and the student remains focused on the task rather than what you are writing. The student should be able to sit comfortably at the table with feet on the floor; if the table is too tall, a block may be used on which to rest the feet.

To obtain more accurate documentation, equip the room with discreet audiovisual equipment. At a minimum, you should have equipment for audio-recording the student's oral responses. Record with a pencil the student's responses and behaviors during assessment, and then review the recording for additions or corrections. Only the materials needed for the assessments should be placed on the table, including at least two sharpened pencils. If necessary, you can administer some of the silent reading or writing assessments in groups; however, more useful information is obtained if each student is observed individually. In a group situation, it is sometimes beneficial to provide personal workspace dividers, to help the students stay focused on their own papers.

You should not attempt to administer all of the assessments during a single session. It is important to watch for and keep anecdotal notes of the student's behavior and to notice signs of inattentiveness, restlessness, or stress in particular. Allow students to take water, restroom, or stretch breaks as needed. The length of the assessment periods will vary, depending on the particular assessment tool(s) being used and each student's attention span. For elementary students, it is usually best to keep the assessment time to no more than 30–60 minutes per day, including breaks. Older students may be able to attend for up to 2 hours per day, with breaks. Use each student's behavior to guide your decision.

Although there is no specific order in which the assessments must be given, starting with one of the interest or literacy inventories is recommended if you do not know the student well. In doing so, you can establish rapport and help the student feel more relaxed in the assessment process. It is beneficial to administer the reading word lists prior to text reading, as the results can help determine at which level to begin the text reading. If the assessment session is longer than 30 minutes, you might consider providing a break and interspersing reading and writing assessments to help keep the student more engaged.

After administering each assessment, quickly review the student's responses to determine which assessment to give next. At the end of each assessment session, analyze and evaluate the student's literacy development according to the assessment protocol. For assessments with multiple levels, continue to the next level until the highest instructional level has been reached. Identify the student's strengths and needs for each assessed area of literacy by integrating information within or between assessments. These diagnostic data will be used to make instructional decisions. When analyzing data, always provide a qualitative analysis, not just quantitative scores. Identify the student's strengths before areas for growth, and give specific examples. See the *Guidelines for Literacy Assessment Analysis* in the Appendix (pp. 359–361).

Phase 5. Identify and Write Objectives for Literacy and Content

Education is likely to be more effective if what students need to learn and the criteria for how well the students learn it are clearly stated to students. This clarity can be achieved by first writing observable and measurable **learning objectives.** Based on assessment data, determine the specific objectives that are appropriate for the next step in the student's development. These objectives should be the ongoing focus of your lesson. You can refer to the revised Bloom's taxonomy (Anderson & Krathwohl, 2001) to identify the level of knowledge you want to assess and observable verbs related to that level. To write a comprehensive learning objective, include the following components: learner, behavior, content, assessment criteria, condition, and rationale (see Table 1.2). The objectives should be aligned to standards such as the Common Core State Standards or Next Generation Science Standards. For literacy and disciplinary lessons, objectives that integrate multiple literacy processes and modalities are recommended.

Phase 6. Plan Instruction

Planning for instruction needs to include decisions about assessment, strategies, materials, learning experiences, and sequence of instruction. The first step is thinking about the **context** of instruction: Which students are you teaching? What are their funds of knowledge? Where and in what format(s) will the instruction will take place? What part of the

	Behavior: observable/ cognitive	Content	Assessment criteria	Condition	Rationale
Learner					
The student will . . .	Say/write/visually represent a thinking process (May be Bloom's taxonomy verb)	Something	Use this assessment/ strategy and do it this well	In this situation	For the purpose of
Who? (Student or students)	Do what? (Observable action/cognitive process)	About what? (Topic)	How? (Task and how accurately, frequently)	What conditions? (Setting or with what provided)	Why? (Improving [name of strategy or skill])

TABLE 1.2. Guide to Writing a Comprehensive Learning Objective

Example: The student will orally and in writing compare and contrast whales and fish in a Venn diagram with at least three similarities and three differences individually, after orally reading the text *Whales and Fish* to improve comprehension of animal classification.

instruction is individual, paired, small-group, or whole-group? Providing individual instruction or flexible grouping according to the instructional objectives for each student is suggested.

Next, using the **objectives**, plan the formative and summative **assessments.** Decide how to assess each student's learning for each of the objectives. Select or create the assessment tools. Identify the criteria for assessing the students' learning, and create scoring guides, checklists, or rubrics containing the criteria. Remember to assess not only individual skills, but the ability to apply them in context. For example, when you are assessing writing, do not forget to assess the content and purpose for the writing, not just the mechanics. Plan how you are going to record details on each student's performance and document the evaluation of each area. In addition, plan opportunities for you and the student to discuss and reflect on specific strengths and needs.

Then carefully select appropriate strategies, tasks, and materials that focus on the whole act of literacy (oral, written, and visual), are within a student's zone of proximal development, and focus on authentic literacy experiences. You should be able to explain why you have made these decisions and why you teach as you do. When teaching a **skill** or **strategy**, start with introducing it in context (e.g., select a text that contains the element to be taught), read the text or portions of the text, teach the skill or strategy, and then return to the text to use it in context. Finally, provide opportunities to apply the skill or strategy in new contexts.

In addition, the choice of appropriate reading, writing, and viewing **materials** needs to be based on the student's instructional level and interest, so that with scaffolded instruction, the student can be successful. Although students should be allowed to give some input into text selection, they should read and write texts from a variety of genres and formats to extend learning. You should consider incorporating technology, such as websites and videos, to better equip the student in gaining knowledge from other media. The texts used in language arts can also be correlated with content area learning standards. You should analyze text characteristics, features, and structures prior to assigning reading. You should plan how you are going to introduce the text, provide background knowledge, and

connect the text to your students' prior knowledge. See Chapter 6 for strategies for selecting and analyzing texts.

Furthermore, plan for how you are going to teach and have your students apply general academic and content-specific language. **General academic language** is language that is used at school orally and in instructional texts; it may not be used in informal social settings. **Content-specific** or **discipline-specific vocabulary** is vocabulary that is typically only used within a particular discipline, such as math, science, social studies, or the arts.

Plan how you are going to **differentiate** the content, process, product, and environment to meet the needs of each student. Determining the appropriate sequence of instruction involves keeping in mind the whole–part–whole philosophy, the gradual-release-of-responsibility model, and the integration of all six literacy modalities.

The *Literacy Lesson Plan Format* (see Appendix, pp. 362–363) provides a guide for planning specific lessons and documenting student learning. This lesson plan format can be used for either individual or group instruction. The elements in the lesson plan include the context for learning; objectives with standards; differentiation; academic language; materials; procedure; assessment with criteria; homework and family communication; attached student work and assessment documents with analysis and feedback; and reflection (see Table 1.3). The procedure section includes an introduction, instruction with guided collaborative, and independent practice and application, and student closure.

The introduction provides interest and motivation to the students, and helps them to make connections to their background knowledge. It also focuses their attention on the lesson by communicating clear objectives, authentic purpose, connection to prior learning, and benefit for learning concepts. To help students engage in the topic, you could ask questions, show pictures or videos, tell a relevant story, or bring in realia. Although not every element may be present in every lesson, you need to make informed decisions about what you are going to teach and why you are going to teach it. This comprehensive lesson plan is detailed, to guide you in the process of making informed instructional decisions. Initially, it is very important to write everything down; eventually, you will make decisions about what essential elements are needed, and what needs to be written down. However, the objectives and the evaluation of students' learning should always be documented.

Phase 7. Implement Instruction

When implementing instruction, you should reflect on your teaching before, during, and after the literacy event. At the beginning of your lesson, clearly state and teach objectives, and connect them to the students' prior knowledge. Throughout the lesson, be sure to define, use, and provide opportunities for students to use general academic and discipline-specific vocabulary terms.

One effective general instructional strategy is the **think-aloud** strategy. Model thinking aloud for your students as you read, write, or participate in literacy activities. Talk about what you are thinking about, thereby providing them with the opportunity to become aware of the many strategies and monitoring behaviors that effective readers and writers use. Have the students keep a list of the different types of things you do to help you understand or compose the text. Then discuss and post the strategies in the students' own words. Once you model the think-aloud process, guide them in their own think-aloud process. Whichever strategy and instructional model you choose, you should anticipate your students' responses and plan adaptations for different learning styles and interests.

TABLE 1.3. Lesson Plan Elements

Element	Guidelines
Context	Describe setting, groupings, and relationship of lesson to unit or prior learning.
Objectives with Common Core State Standards or other standards	• Include objectives for **literacy processes** (language/vocabulary, word analysis, reading fluency, comprehension, and composition). • Include objectives for **content area/discipline** (language arts, math, science, social studies, and/or arts). • Incorporate multiple **literacy modalities** (speaking, listening, reading, writing, viewing, and visually representing) in the objectives.
Differentiation	Include how you will/did adapt the **content, process, product,** and **environment** for class and specific students. Describe potential **misconceptions.**
Academic language	List the **general academic vocabulary** and the **discipline-specific vocabulary** that you plan to teach and expect students to know and use.
Materials	List all teacher and student materials and resources needed for the lesson.
Procedure	Sequence what the teacher and students will say and do, along with the formative and summative assessments.
Introduction	Include engagement activities, clear objectives, authentic purpose for learning, connection to background knowledge, connection to prior learning, introduction of content, preassessment of what students know or want to learn.
Instruction	• Present and model strategies and learning activities in context. • Define and use academic and content-specific vocabulary.
Guided and collaborative practice	• Encourage application of learning with scaffolded support and specific feedback. • Reinforce use of academic and content-specific vocabulary. • Demonstrate integration of skills, strategies, or tasks into real-world applications.
Assessment with criteria and planned feedback	Describe how you will assess or check for understanding and evaluate student learning before, during, and after instruction. Include criteria for acceptability and planned feedback.
Student closure	Describe how students will or did reflect on their learning of objectives (student review or summary of learning).
Homework and family communication	Describe the homework or extensions related to this lesson. Describe how this information was or will be shared with the families.
Attached student work/ assessment documents	List and then attach students' work and other assessment and observational documents, with analysis and positive and constructive feedback provided to the student.
Teacher's reflection	Reflect on your teaching, student learning, and future plans for how to enhance the retention and transfer of the processes and content. Include how individual students met each of the objectives. Provide specific examples of student's correct and incorrect responses as well as a summary of strengths and areas for improvement.

However, you also need to adapt your lessons during teaching to meet the needs of individuals. These modifications should be recorded for future use. Monitor your instruction to see that it is meaningful and emphasizes success.

During guided practice, provide specific feedback on strengths and areas for growth. You need to focus first on what a student can do, rather than just pointing out mistakes. Mistakes are just windows into students' thinking. Mediate your students' learning by scaffolding the type and amount of your prompts and support. **Scaffolding**, provided within each student's zone of proximal development, is "a process that enables a student or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his (or her) unassisted efforts" (Wood, Bruner, & Ross, 1976, p. 90). Encourage active learning and problem solving. Assess during instruction because assessment needs to be continuous as the student is learning. Adjust instruction while teaching to ensure successful learning, and do not wait until the lesson is over. Base your instructional decisions on a student's ability to construct meaning or compose writing by using information from texts and information that the student already knows. According to Clay (1993), such scaffolded instruction enables students to develop a self-extending system, whereby they utilize multiple techniques and strategies while solving problems.

You build independence by providing your students with the feedback and resources to understand themselves as effective speakers, readers, writers, presenters, and problem solvers. Elicit metacognition by first verbalizing your own thinking during the literacy process, and then guiding your students in doing the same. Select strategies that will facilitate learning in the most efficient way for the students. When you are an effective observer, listener, and responder, you are better able to meet the needs of individual students.

Phase 8. Assess, Analyze, and Give Feedback on Student Learning

Assess before, during, and after instruction in order to identify specific strengths and areas for growth. To enhance students' learning, it is important to provide them with clear explanations of what to do, how to do it, and what the criteria for judging their behavior are. Without such explanations, students may be confused and use time inefficiently in trying to figure out what they are supposed to learn. Both during and at the end of the lesson, it is essential to bring closure to a student's learning by using your own and/or the student's assessments of learning. Oral, written, or observation assessments can be used, such as oral reading records, retellings, or written reflections. Again, be sure to document each student's responses and behaviors.

Once the assessments have been administered, both the quantitative and qualitative data can be analyzed to provide specific information about each student's strengths and needs in language, reading, and writing processing. Many of the assessments in this book can help identify the independent, instructional, and frustration levels of a student's reading and writing. Since many factors (including background knowledge) have an impact on a student's functioning level, grade levels can only be approximate. In addition, an analysis can identify strategies that a student uses or neglects in problem solving. This information is often even more important when you are planning which strategies or concepts to teach. Other assessments, such as observations, work samples, checklists, or rubrics, provide additional information about how students perform during authentic oral language, reading, and writing tasks. Narrative comments and quantitative scores based on the objectives of literacy can be documented and evaluated.

Assessment is primarily used to provide specific feedback to students to support their learning. Point out to students specific examples, areas of strength on the assessment, and help them make connections between these strengths and areas for improvement. Using the assessment responses, select one to three areas for improvement, and scaffold their learning by providing specific problem-solving strategies to correct the information on the assessment and apply it to new learning. The following are examples of literacy questions adapted from Gunning (2004, p. 26) that you can ask to help you plan, revise, and improve your literacy programs and your instruction.

- Where is the student in language, reading, and writing development?
- At what grade level is the student reading and writing?
- Is the reading or writing at the independent, instructional, or frustration level?
- How adequate are the student's listening, reading, and writing vocabularies?
- What comprehension and word analysis strategies does the student use?
- Does the student know how to study?
- What are the student's interests in and attitudes toward reading or writing?
- Does the student enjoy reading or writing in a variety of genres?
- Does the student read and write on one's own?
- What kinds of writing tasks has the student attempted?
- Is the student's reading and writing improving?
- What strengths and needs does the student have in language, reading, and writing?

Phase 9. Reflect on Student Learning and Instructional Decisions

During reflection, begin by measuring each student's learning outcomes against goals, objectives, and developmental benchmarks. You and the student need to reflect on the student's learning, the student's affect, and your teaching. You could ask the student questions such as these: "What did you learn? What did I do that helped you learn? What did you like about the lesson? What was difficult for you? What might help you learn better?" If the student omits any of the objectives, talk about them and ask the student to explain what was learned. Reflecting on their own learning helps students solidify their learning. To increase active engagement during group lessons, have each student share responses with a partner before selecting a few students to respond to the class. When your students go home after school and a family member asks questions such as "What did you learn in school today?", they will (ideally) have something specific to tell them. Remind family members periodically that this is an important dialogue to have with their children.

For your own reflection on the lesson, you should answer the following questions: "What went well and why? What didn't go well and why? What did I learn about my teaching? How can instruction be adapted to meet each student's needs in the future? Finally, what does each student need instruction on next to move literacy development along?" For additional ideas or sharing concerns, talk with your colleagues and other professionals.

Finally, return to Phase 1 to measure student outcomes against goals, objectives, and developmental benchmarks. The data of student responses are interpreted and used to show individual growth over time. This approach can also be used to compare data for groups of students, the whole classroom, or the whole program. In order for this information to be useful to you, Paris and colleagues (1992) suggest giving careful consideration to the selection of methods for recording, organizing, and accessing assessment data for each

student. These methods include a process portfolio, where ongoing assessment documents and data are kept; an archival portfolio, where a summary of previous assessment data are kept and passed to the next teacher; aggregated records, which are collections of assessment data from different sources; and electronic storage/retrieval, where student data are recorded in an electronic file.

These nine integrated phases in the cycle of literacy assessment and instruction support you in using assessment to inform instruction. The assessment results should then be used to improve opportunities for student learning by connecting assessment data to new instructional goals and objectives, to inform families of the students' growth, and to help students monitor and evaluate their own work. Cycling back to Phase 1 allows you to focus back on each student and plan for new or continuing goals and learning objectives.

UNDERSTANDING DIVERSE LEARNERS

Diverse learners include students from racially, ethnically, culturally, linguistically, and socioeconomically diverse families and communities. Students as individuals also have diverse cognitive, socioemotional, and physical abilities. Teachers have a responsibility to celebrate diversity and to make every student feel accepted and respected by the classroom community. Diversity is discussed further in Chapter 2.

Some students have an identified disability, some have learning or socioemotional challenges, but all students have strengths. These strengths can be used as building blocks to foster new learning. The following provides some foundational information about learning disabilities and information processing.

Learning Differences and Disabilities

Students who have learning differences, or who have been formally identified as having learning disabilities, have increased difficulties in processing information. **Learning disabilities** are neurologically based conditions that interfere with the acquisition, storage, organization, and use of skills and knowledge. They are identified by deficits in academic functioning and in processing memory, auditory, visual, and linguistic information. Students with learning disabilities have normal to above-normal intelligence, and the disabilities are not caused by emotional disturbance; social or cultural conditions; or a primary visual, hearing, or motor disability. Students should receive comprehensive vision, hearing, and overall physical exams to rule out or make adaptations for physical disabilities.

Information Processing

There are four stages of information processing used in learning, according to the National Dissemination Center for Children with Disabilities (2004): input, integration, memory, and output.

- **Input** is the process of recording in the brain information that comes from the senses; for literacy, these are predominantly visual and auditory processes.
- **Integration** is the process of interpreting the input information, such as sequencing, abstraction, and organization. Sequencing disabilities might include retelling

a story in an incorrect order, reversing words, or having to start from the beginning of a sequence (such as the days of the week or the alphabet) to determine what comes next. Students who have a disability involving abstraction have difficulty in inferring meaning. They may read a story, yet may not be able to generalize from it. They find it difficult to understand homophones, jokes, puns, or idioms. Students with organization disabilities find it difficult to make bits of information cohere into concepts and relate it to what has previously been learned. They may learn a series of facts without being able to answer general questions that require the application of these facts.

- **Memory** is the brain's storage for later retrieval. Short-term memory retains information briefly while a person attends to it or concentrates on it, such as remembering a phone number long enough to dial it. When information is repeated often enough, it enters long-term memory, where it is stored and can be retrieved later. Students with these disabilities need many more repetitions than usual to retain information.
- **Output** of information is achieved through language or motor (muscular) activity. Language disabilities almost always involve what is called demand or responsive language, rather than spontaneous or assertive language. Motor disabilities can be poor coordination of large muscle groups, called gross motor disabilities, or poor coordination of small muscles, called fine motor disabilities. Students with motor disabilities often write slowly, and/or their handwriting is unreadable. They may also make frequent spelling, grammar, and punctuation errors.

Learning disabilities can be classified by their effects at one or more of these stages. It is important to remember that each child has individual strengths as well as weaknesses at each stage. A student who has difficulties in literacy may have a diagnosed or undiagnosed learning disability. Students are typically diagnosed with learning disabilities by a triangulation of observational, norm-referenced, and criterion-referenced assessment data. Once a student's disability has been identified, an individualized education program (IEP) is developed for that student. There are several classifications of learning disabilities. Some students are diagnosed with general learning disabilities and/or nonverbal learning disabilities, while others have specific disabilities. A learning disability cannot be legally identified until a student has received specific instruction in each of the processes over a prolonged period.

A **visual processing disorder** involves the inability to process visual information, such as the identification and discrimination of letters and words, spatial awareness, and visual memory. Some students have difficulty in recognizing the position and shape of what they see. Letters may be reversed or rotated. They may jump over words, read the same line twice, or skip lines. Those diagnosed with an **auditory processing disorder** may have difficulties with auditory discrimination (distinguishing between similar sounds and words), auditory figure–ground discrimination (distinguishing between relevant speech and background sounds), and/or auditory memory (recalling what words were heard).

More recently, however, the educational focus has been less on labeling students and more on documenting their specific strengths and needs during authentic literacy tasks and providing different levels of instructional intervention for students who have difficulties. As a literacy specialist or teacher, you should be an integral member of the literacy team who can provide support to all students, especially those who have literacy processing problems. Another one of your roles is to directly assess and evaluate students' strengths and needs, or to support others in this process.

UNDERSTANDING DIFFERENTIATED INSTRUCTION

Differentiated instruction consists of the efforts teachers make to respond to the different learners in the classroom. The teachers vary their instruction when working with individuals, groups or a whole class, to create the best learning experience possible for each student. Based on students' backgrounds, development, interest, or learning profiles, teachers can differentiate at least four classroom elements: the content, process, product, and learning environment (Tomlinson & Allen, 2000).

The **content** is what the student needs to learn or how the student will get access to the information. Examples of differentiating content include the following:

- Providing students with additional resources that match their different levels of understanding.
- Using reading and instructional materials at varying readability levels.
- Opportunities for students to select their own topics for reading, writing, or projects.
- Having students use technology to gain access to content, including audio- or video-recorded information.
- Providing spelling or vocabulary words at students' readiness levels.
- Presenting ideas through visual, auditory, kinesthetic, and tactile means.
- Meeting with small groups to reteach an idea or skill for some learners, or to extend the thinking or skills of other learners.
- Providing experiences at a variety of Bloom's taxonomy levels.

The **process** is differentiated by the activities in which the student engages in order to make sense of or master the content. Examples of differentiating process or activities include the following:

- Providing activities with different levels of support, challenge, or complexity.
- Providing opportunities for paired or small-group work.
- Providing different tasks for the students to complete, with similar objectives.
- Offering manipulatives or other hands-on supports for students who need them.
- Reteach or exempt students based on performance.
- Providing information early and expecting the task to be completed at the same time.
- Varying the length of time a student may take to complete a task in order to provide additional support or to pursue a topic in greater depth.

The **product** is differentiated by the evidence for learning (assessment or project). Examples of differentiating products include the following:

- Giving students options of how to demonstrate required learning (e.g., give a performance, write a letter, or create a visual or multimedia presentation).
- Using scoring guides or rubrics that match and extend students' varied skill levels.
- Allowing students to work alone or in small groups on their products.
- Encouraging students to create their own product assignments, following specified criteria.

The **learning environment** is differentiated by the way the classroom works and feels. Examples of differentiating the learning environment include these:

- Making sure there are places in the room to work quietly and without distraction, as well as places that invite student collaboration.
- Providing materials that reflect a variety of cultures and home settings.
- Setting out clear guidelines for independent work that match individual students' needs.
- Developing routines that encourage students to get support from print and electronic resources and their peers when teachers are busy.
- Providing flexible seating and opportunities for movement.
- Providing a risk-taking and supportive environment.

Differentiated instruction can be implemented within the framework of **universal design for learning** (Meyer, Rose, & Gordon, 2014), which is designed to improve and optimize teaching and learning for all people. It is organized around three major principles: the use of multiple means of representation, multiple means of action and expression, and multiple means of engagement. Every student comes from a different background, has different experiences, and has different ways of thinking. Due to the vast diversity among learners, teachers must work diligently to get to know their students and how they learn, use different engaging instructional methods and materials, provide meaningful and challenging learning experiences, and create a caring and supportive environment that enables all students to succeed.

SUMMARY

This introductory chapter has provided background information on literacy, assessment, and instruction, which will serve as a useful foundation as you use this book. It is important to remember that "literacy" is a broad term that encompasses oral, written, and visual modes. Processes of literacy include language, word analysis, reading fluency, reading, and listening comprehension; writing composition; and viewing and visually representing—all of which is included in the subsequent chapters. Assessment is not separate from instruction, but occurs before, during, and after it. When planning and implementing instruction, you need to make numerous decisions based on your knowledge of literacy development, strategies, materials, and each student's strengths and areas for growth.