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LEARNING GOALS, **TASKS, AND CYCLES OF FEEDBACK** FOR CONTINUOUS IMPROVEMENT convin 2024

# On the Role of Learning Goals, Tasks, and Cycles of Feedback for Continuous Improvement

If we want the next generation to truly be better educated . . . then they need a setting in which they can practice, get feedback, and try again as new ideas gradually begin to make sense.

-Meier (1995, p. 148)

We open this first chapter with a set of claims. These claims derive from our deepest convictions about the purposes of schooling. Any book on what is to be done in education today needs to situate the values, the beliefs, and the proposed work for schools by its authors with clarity and transparency. Like Deborah Meier (1995), we believe that students need spaces where they "can practice, get feedback, and try again" (p. 148) as new ideas come into their lives.

To draw on lessons from past assessment reforms, ones that have at times promised more than they yielded, we have begun the book with an exploration of learning goals—for our schools, for our teachers, and for our students. Good **feedback** will always be rooted in important, enduring educational goals.

In this chapter, we offer a larger framework for the ingredients, concepts, and tools that matter in making feedback *formative*. Setting learning goals out on the table for everyone to see matters in our experience. Therefore, each chapter will unpack the argument for enduring educational goals and will better articulate the core elements of what we mean by "feedback for all"—with a purpose.

In the meantime, to engage more deeply about the larger aims of feedback, before we start the journey, let's agree: Feedback only matters in a world where we grow, where we learn, and where we expect everyone to change for the better. To move ahead in any endeavor in life, we need help understanding where we are going, what is on the horizon, and which steps will lead us there. Feedback literally shows us the way.

**CHAPTER** 

Without purpose, feedback loses its power. For feedback to be effective, we must ask:

- Who is feedback for?
- Who provides feedback?
- Who benefits from feedback?
- What good does feedback serve?
- How can feedback make a difference?

In the chapters ahead, we outline a framework for establishing, as Dr. Linda Darling-Hammond puts it in *The Right to Learn* (1997), what it looks and feels like to engage students in democratic education. To this charge of creating schools that work for all students, we add a corollary: *Formative feedback must be a living, breathing part of every child's education*.

Feedback is not a luxury; it is a necessity. Feedback serves the most sacred purposes of democratic education. Feedback both enlightens and advances us toward **lifelong learning** goals, in part by caring for the educational process as much as educational outcomes. Put simply, feedback is not a mere means to an end—it is an end in itself. No one learns without feedback on how they are doing and where they can go next with support.

In today's schools, we must take the purposes of schooling and the need for formative feedback more seriously than ever.



years, the right to learn is undoubtedly the most fundamental. . . . The freedom to learn . . . has been bought by bitter sacrifice. And whatever we may think of the curtailment of other civil rights, we should fight to the last ditch to keep open the right to learn, the right to have examined in our schools not only what we believe but what we do not believe; not only what our leaders say, but what the leaders of other groups and nations, and the leaders of other centuries have said. We must insist upon this to give our children the fairness of a start which will equip them with such an array of facts and such an attitude toward truth that they can have a real chance to judge what the world is, and what its greater minds have thought it might be.

Source: Foner (1949) pp. 230-231.

Every young person has the right to learn (Darling-Hammond, 1997). At reformed middle and high schools in the U.S., **performance assessments**, portfolios, and projects have served as beacons of assessment reform for decades. Nationally recognized examples of assessment reform from schools such as Central Park East Secondary School, Fannie Lou Hamer Freedom High School, International High School, and the Urban Academy demonstrate that the pursuit of academic excellence and equity are obtainable and mutually reinforce one another. At these schools, the success of classroom and schoolwide assessment reform is not a distant aspiration of policymakers or advocates for change. Assessment reform visibly appears in students' work (Palladino & Shepard, 2022). Student projects, performance tasks, and assignments exemplify the values of **assessment for learning** for all.

#### Darling-Hammond (1997) writes:

At Central Park East Secondary School (CPESS), students' intellectual development is guided by five "habits of mind": the abilities to weigh and use evidence, to see and understand differing viewpoints, to see connections and relationships, to imagine alternatives, and to assess implications and effects. These intellectual habits permeate the entire curriculum and evaluations of student work. They are incorporated in the assessment criteria. . . . (pp. 156–157)

[Performance assessments] are rigorously evaluated and often sent back for more work; students learn what it takes to develop a piece of work that meets the standards of inquiry in a field and the standards of written and oral discourse demanded by committee members. They get feedback and revise and revise and revise; they internalize standards; they develop the capacity for sustained effort and ambitious work. (p. 157)

An alternative approach to [accountability] reform [in these schools] uses standards and assessments as means of giving feedback to educators and tools for organizing student and teacher learning, rather than as a sledgehammer to beat schools into change. (p. 241)

Darling-Hammond and colleagues' observations ring true today as much as they did at the end of the last century. It is time to embrace our most vulnerable and **at-promise** learners by providing the feedback practices they need to advance and grow. We know that students seek and appreciate true mentorship, an exchange of ideas, and opportunities to engage in authentic conversation about meaningful topics. But to reach these places of learning, caring, and joy (Newmann, 1996; Sizer, 2013; Yeager et al., 2013), we must recommit to feedback for and by all.

## Embracing Educational Purposes and Values

Schools have always had multiple goals and purposes (Apple, 2011; Dewey, 1923; Kliebard, 2004; Ravitch, 2001), but how do these goals and purposes look and feel from the perspective of classroom learning and assessment as the proverbial rubber hits the road? Do these myriad purposes bring us closer to academic excellence day by day, lesson by lesson, draft by draft? Do they bring us closer to equity task by task, project by project, assignment by assignment? Can we have both equity and excellence in the work our students produce in our schools in the pursuit of a more informed, educated, and just society?

We believe we can. Like those of you reading this book, we believe schools still matter in shaping values and unleashing the power of young people's ideas (Meier, 1995). **Habits of mind,** heart, and work matter. Schools are places where young people learn to try out, challenge, and make a go of these and other habits. The habits of mind are critical to democracy (Dewey, 1903). To acquire them, one needs feedback.

Educators have always had a special role in society. Teachers set specific and general educational goals to realize a broad range of educational purposes. In middle and secondary school contexts, subject content and disciplinary knowledge is key. Teachers work to weave good instruction with positive assessment experiences to foster engagement in science, music, computing, art, mathematics, history, economics, civics, ethnic studies, world languages, and physical education of all kinds, including sports. Each of these contexts offers us purpose and direction as we work to answer the question: What makes a good school and what does it mean to assess well?

Yet, if reform has taught us anything, it is that knowing what makes a good education must be clear to all stakeholders (Cuban, 1990; Tyack, 1974; Tyack & Cuban, 1995). Parents, children, and teachers must be working from similar goals and assumptions. We've noticed that getting on the same page takes communication about what matters: In this book, we will show that it is formative feedback that matters most to **continuous improvement**.

If assessment reform has taught us anything, it is that everyone benefits from signposts and roadmaps that tell us where we are and what we can expect down the road. Accountability over the last decades has promoted a data-driven mindset: Numbers, points, and scores have occupied many. A focus on formative feedback is different; it re-centers our work. It says that interim assessments that track yearly progress are not enough. We need better resourced and more nimble feedback strategies that work for all—each day in every learning space. The real, daily work of improvement comes from looking closely at student work, not at grades and test scores. Each teacher has the power to make a difference and to help others to improve when feedback is valued by the school and the community as a means to that end. Schools are places where children can be invited to grow intellectually, emotionally, and socially. We shepherd our students daily along different paths toward different educational goals, sometimes with specific purposes in mind and other times with more general hopes and aspirations. But without clear, consistent feedback practices, procedures, and signals, it is unlikely our students will be able to share our vision. To correct course and get back on track or dive deeper, students and teachers need feedback cycles and routines.

Educational goals that bring feedback to life—in every classroom can and should orient us. An authentic commitment to these goals rooted in student work allows teachers and students to reflect on first and final drafts. These feedback-driven goals remind us to look at next steps and support students as they develop their habits of work. True accountability will guide our educational priorities toward student work—on rich tasks, real-world projects, and longer-term assignments that honor our students' individual progress and growth.

We will say it as teachers, researchers, and educators again and again: Feedback practices will always do the heavy lifting in any continuous improvement plan. To move us beyond laudable aspirations and good intentions of assessment reforms, we must put feedback to work, minute by minute, day by day.



## **Guiding Questions**

- 1. How can we think about feedback more *effectively*? Can feedback affect how students advance toward specific goals?
- How can we use feedback more equitably? Can feedback create conditions for success that advance students' work on projects, assignments, and tasks to fulfill these goals?
- 3. How can we use feedback *effectively* and *equitably* to ensure all of our students are ready for college and the workplace because they know how to and are able to use feedback for continuous improvement?

We have organized this book around our formative feedback (FF) framework to provide everyone with three main lenses and corresponding focal points for making feedback practices visible to all. The FF framework (Figure 1.1) ensures that one can see how contexts for learning, educational goals, and content **standards** are embedded in continuous improvement of instruction and assessment. Whether one chooses to dive deeper into *directionality*, *configurations*, or *modalities* of feedback, each lens is interconnected with the others, and we offer solutions on how to connect and weave each of them together in practice in the chapters ahead.

Contexts for Learning				
Face-to-Face	Blended	Distance Learning		
Focal Point				
Directionality Configuration Modality				
Lenses				
Teacher-driven	Whole class	Written		
Peer-to-peer-driven	Small groups (2–4)	Spoken		
Self-driven	Individual (1:1)	Nonverbal		
Learning Goals, Standards, Skills				
Fasks, Projects, Activities       Rubrics, Progress Guides, "Next Steps" Organizers				

Figure 1.1	Formative	Feedback	Framework
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As we have written in the How to Use This Book section, our FF framework also serves to guide the reader through possibilities for diving deeper into any focal point while maintaining a systematic, integrated, and holistic view of the power of feedback to change the trajectory of outcomes.

These guiding questions and the FF framework (Figure 1.1) will anchor our exploration of the role of learning goals, rich tasks, and the need for cycles of feedback. For now, let's define more concretely what we mean by *purpose-driven* formative feedback, which is tied to learning goals.

## Purpose-Driven Feedback Is Tied to Learning Goals

If there is one thing we know as teachers, it's that purposes for feedback matter. No one wants to waste time on feedback that does not aim at improvement or change. We have chosen the term *purpose-driven feedback* for two reasons. First, feedback must be tied to learning goals (LGs) in the subject discipline, curriculum, and **unit of instruction**. Second, we recognize that teachers are responsible for ensuring their students receive the purposeful feedback everyone needs

- to advance learning toward a set of LGs and
- to use LGs to gauge current levels of performance with tasks, projects, and other work products.

Purpose-driven feedback led by teachers is anchored by well-defined competencies, skills, and dispositions (i.e., learning goals in an academic subject). It is also fundamentally student centered. The purpose of feedback is to support student growth and development with a task. The aim of purpose-driven feedback is to assist in bringing students to the next step. But that cannot be done without care, respect, and attention for where the student currently is, nor without the knowledge and expertise of the teacher to establish LGs for the class.

## Establishing Goals to Guide Feedback Practices

## Learning Goals Matter and Can Shift Over Time

**Formative assessment** practices must be tied to the curriculum in a unit of instruction and over a sequence of coursework rooted in subject disciplines (Heritage & Wylie, 2020).

We know that as students advance through the system of schooling, the demands for disciplinary practice and expertise increase. Reading, writing, and speaking and listening skills are important as our students progress from elementary grade levels toward high school. But demands, for example, for more complex mathematics coursework or sports programs increase as we prepare young people for college and work.

Everyone wants a good, engaging general education for their children, but we expect schools to prepare young adults to specialize eventually. To specialize in science, math, or art, for example, purpose-driven feedback is required to maximize impact; your purpose-driven feedback will be anchored in the subject discipline practices and skills themselves. Feedback for algebra may look different than feedback for physics or portraiture or Spanish or global history. But there will also be commonalities and places we agree to set aside subject matter differences.

It's difficult turning complex educational and learning goals into tangible, developmentally appropriate avenues for authentic exchanges of ideas. And yet it is key to making feedback work. We must know where we are going today, next week, and over the course of a semester. The table below outlines what purpose-driven feedback goals are and how they differ from other kinds of assessment goals.

	PURPOSE-DRIVEN FEEDBACK GOALS		
	Typically		Typically are not
•	are connected to larger frameworks (e.g., standards, taxonomies, LGs).	•	tied to a single objective(s) at end of each lesson.
•	are focused on prioritizing core expectations/success criteria for student success.	•	checklists for an assignment.

	PURPOSE-DRIVEN	FEEDBACK GOALS
	Typically	Typically are not
•	are accompanied by graphic organizers and visual aids such as progress guides for unpacking a task or project.	<ul> <li>aimed at positive reinforcement for behaviors (e.g., classroom management).</li> <li>points driven.</li> </ul>
•	are rich with exemplars of first drafts and finished products that emphasize incremental steps.	<ul> <li>part of a quiz, review, or test corrections event.</li> </ul>
•	involve well-defined processes during class time to gauge where we are now and the next possible step(s).	<ul> <li>rooted in grading practices that assign <i>A</i>, <i>B</i>, <i>C</i>, <i>D</i>, or <i>F</i>.</li> </ul>
•	use feedback-friendly tools (e.g., Universal Design for Learning [UDL] accessibility to all learners).	
•	emphasize opportunities to grow through a process of revision, rethinking, and redoing.	
•	center assessment relationships between teacher and student(s) on exchanges of information.	201
	<b>^</b>	

We noted that purpose-driven feedback goals are always connected to larger frameworks (e.g., standards, taxonomies, LGs). Let's now discuss how to develop assessment activities based on clear, well-defined, and meaningful LGs. With this brief review, we will show how to use different schematic representations of LGs while reminding ourselves that it is essential to map pathways of feedback with visible tools, processes, and practices.

In contrast to static checklists that merely enumerate all the possible destinations of subject competence, purpose-driven feedback practices and routines set goals that are achievable for students. Too many standards documents, especially those provided by the policymakers, miss this mark. They offer a vaguely visible distant horizon but contain no directions for how to get there.

Whether they are known as *core competencies, essential knowledge*, or *power standards*, these conceptualizations of education standards attempt to describe what students should know and be able to do at key junctures in their educational journey. They offer lists of proficiencies designed to identify markers of success for college and the workplace. These education standards promise to show us where to prepare students to engage in deep, lifelong learning (National Research Council, 2012). In other words, they represent aspirations for adults who have set learning goals for students.

Key to all the policy talk around educational standards and purposes is—or should be—the possibility of assessing a thinking, living curriculum that serves children well (Brown et al., 1992; Resnick & Resnick, 1992; Rothman, 1995; Shepard, 2000; Torrance, 1995a, 1995b; Wiggins, 1993a, 1993b).

The new 21st century approach to standards includes notions such as crosscutting concepts and skills-based practices that represent a commitment to student growth and development. Ideally, such LGs and skillsbased practices link different domains of knowledge and help students make connections within and across subject disciplines.

For example, in science and engineering curricula at reform-based high schools, we can see how crosscutting concepts such as understanding patterns, stability and change, systems and system models, and structure and function help students develop a coherent and scientifically grounded view of the world. In schools that embody curricula that emphasize crosscutting practices, students are

- asking questions,
- developing and using models,
- planning and carrying out investigations,
- analyzing and interpreting data,
- using mathematics and computational thinking,
- constructing explanations,
- engaging in argument from evidence, and
- obtaining, evaluating, and communicating information.

It's important to recognize that the "new standards" aren't so new. Many are borrowed from schools like CPESS that are committed to the *habits of mind*, an outcomes-based framework that emphasizes authentic portfolio and performance assessment reforms in the decades prior to No Child Left Behind (2000). Other approaches to anchoring educational goals in the curriculum draw from well-established taxonomies, including Bloom's taxonomy of educational objectives, Webb's **depth of knowledge (DOK)**, and Biggs and Collis's structure of observed learning outcomes (SOLO).

Some readers may be very familiar with these educational goals and standards-based frameworks; others may appreciate a quick refresher. We have seen school districts and state authorities grapple with different frameworks over the years. We know they matter to policymakers and school leaders, so we will take the time to revisit and review how these frameworks can (in theory) advance all the purpose-driven feedback approaches to classroom and school-based assessment presented in our book.

The questions before us include the following:

How do these various "big picture" frameworks used to define LGs advance and support the work of formative feedback for students?

- Can these various frameworks serve as guideposts to better define the purposes of feedback in our lessons, units, and larger curricular aims?
- What can be done with standards-based frameworks in particular to better ground them in concrete feedback practices that make an actual difference in our students' work product in our classrooms and places of learning?

#### **The Habits of Mind Framework**

The habits of mind at CPESS (Darling-Hammond, 1996; Duckor & Perlstein, 2014; Meier, 1995) refer to learning goals that educators at the school expect students to engage in and eventually internalize to accomplish complex, real-world tasks and activities aimed at preparation for college. These habits are necessarily cognitive, social, psychological, and practical. The goal of a CPESS education was to habituate every young person, as school founder Deborah Meier says, with the passion "to use one's mind well" (Gold & Lanzoni, 1993).

In keeping with the student-centered focus of CPESS and its commitment to project-based learning (PBL), a mini-documentary-Graduation by Portfolio-was created by staff, teachers, and students in 1993. This documentary was part of a PBL activity that a group of students engaged in over a year. The student-created documentary now serves as a record of assessment reform that shows the power of school-based accountability systems centered on enduring LGs. These LGs-the five habits of mind-were interwoven into a teacher-developed curriculum that focused on rich tasks, PBL, and long-term assignments called exhibitions and investigations; formative feedback was essential to success for all.

Following John Dewey's notion that education is a process of practicing what we learn to better understand it, these

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social and cognitive habits of mind describe how students can experience a living curriculum and transform their own understanding of the world through real-world practice.

The habits of mind, cast by the faculty at CPESS as **essential questions (EQs)**, formed the cornerstone of the curriculum and schoolwide LGs. Through the cognitive lens of the five habits of mind, all the teachers at CPESS sought to develop interdisciplinary curricula to better foster their students' curiosity, intellectual engagement, and academic mastery in preparation for college.

The five habits of mind demand that everyone ask:

- *Evidence*: How do we know what we know? What is the source? Is it credible?
- *Perspective*: From whose point of view is this being presented? Are there other viewpoints on this topic?
- Connection: How is this event or work connected to others? What causes what?
- Supposition: What if things were different?
- *Relevance*: Who cares? Why is this important?

Using questions that frame cognitive learning goals, the habits of mind are demonstrated through exhibitions, which are sets of performance tasks (labs, essays, art installations, research papers, videos, etc.). These artifacts lead to portfolios that serve as examples of achievement. Each assignment, exhibition, and portfolio is developed, revised, and transformed by formative feedback from classroom teachers, advisors, paraprofessionals, and the resource room staff.



Please use the QR code above.

It is the inquiry-driven, performance task-based learning approach of schools such as CPESS that brings feedback practices to the foreground. Each question for students is grounded in a **rubric**, which outlines a set of learning outcomes shared by all. The learning criteria and EQs are schoolwide. Students, parents, and staff can examine the evidence for reaching a particular level of performance while committing themselves to working on current drafts of student work to ensure progress is being made.

The approach to continuous improvement embodied at schools such

as CPESS puts formative feedback on equal footing with summative or benchmark assessment. A common thread in these feedback-driven reforms is the focus on *process* and *product*. There is a consensus: Having standards is necessary but not sufficient for coaching children and young people in how to use their minds well. At these places of learning, feedback-in short and long cycles-ensures that students know what next steps are within their reach on a daily basis.

## The Bloom's Taxonomy of Educational Objectives Framework

Today's standards are typically guided by the more familiar attempt to describe what students should know and be able to do using Benjamin Bloom's taxonomy. Very often, we see unit and **lesson plans** borrowing the language of Bloom's **schema**. The original and later revised versions of Bloom's taxonomy are a schema (or **mental model**) for classifying educational goals, objectives, and skills that employ a cumulative hierarchical framework. Bloom's (1956) original version of the taxonomy delineated six levels:

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Each level of Bloom's taxonomy is intended to differentiate higher-order thinking from lower-order thinking in a curriculum and has been used for the purpose of differentiating questions and tasks.

2024

Bloom's revised version (Anderson et al., 2001) describes two "dimensions" of LGs: a knowledge dimension, of which there are four categories—factual, conceptual, procedural, and metacognitive—and a dimension encompassing cognitive processes. Both are important to defining learning goals within and across curricula. In the revised version, the six categories of the cognitive process dimension (Anderson et al., 2001) are remember, understand, apply, analyze, evaluate, and create.

While conceptually useful for planning curricula and classifying assessments, these two dimensions operate without any reference to content-specific learning trajectories or progressions. Because Bloom's taxonomy lacks traceable progress levels, it is difficult for teachers and students to figure out what feedback is necessary along a continuum of practice and when to apply feedback in the learning cycle. It is also difficult to determine what next steps should be pursued, in part because Bloom's taxonomy was never designed to address feedback practices.

#### The Webb's Depth of Knowledge Framework

Similar to Bloom, Norman Webb introduced the concept of DOK in 1997 in the context of defining criteria for judging the alignment between expectations and assessments in math and science. He later extended his thinking to other content areas. Unlike Bloom's taxonomy, which focuses on the type of thinking students are expected to demonstrate, Webb's DOK focuses on the context, scenario, setting, or situation in which students express the extent of their thinking.

The DOK taxonomy is a general theoretical framework used in assessment contexts to describe, characterize, or hierarchically organize student responses to cognition-related tasks. The model designates how deeply students must know, understand, and be aware of what they are learning to attain and explain answers, outcomes, results, and solutions. There are four DOK levels:

- Level 1 focuses on recall and reproduction of data, definitions, details, facts, information, and procedures (knowledge acquisition).
- Level 2 involves the use of academic concepts and cognitive skills to answer questions, address problems, accomplish tasks, and analyze texts and topics (knowledge application).
- *Level 3* requires students to think strategically and reasonably about how and why concepts, ideas, operations, and procedures can be used to attain and explain answers, conclusions, decisions, outcomes, reasons, and results (knowledge analysis).
- When demonstrating *Level 4* cognition, students think extensively about what else can be done, how else learning can be used, and how the student could use what they have learned in different academic and real-world contexts (knowledge augmentation).

While Webb's DOK taxonomy designates how extensively students are expected to transfer and use what they have learned in different academic and real-world contexts, there is a knowing-doing gap similar to the one found in Bloom's taxonomy. We are presented with important learning goals but little idea of how to embed them within processes, procedures, and **scaffolds** that support feedback.

These taxonomies describe a destination, but they lack suggestions for how teachers and students can bring formative feedback to life on actual projects and tasks that aim to demonstrate what students know and can do.

#### The SOLO Taxonomy Framework

The limits of Bloom's and Webb's taxonomies become apparent when we refocus attention on trajectories of feedback. The abstract learning goals that help define higher-order thinking skills are laudable and, in principle, useful for planning or reviewing curriculum and assessment targets across large educational and testing systems. But feedback for, with, and by students is difficult when we only describe *levels* and *types* of knowledge. A more useful taxonomy for feedback-driven goal setting is found in John Biggs and Kevin Collis's structure of observed learning outcomes (SOLO). The **SOLO taxonomy** tracks the development of knowledge and skills across a generic but emerging learning trajectory. The five levels of progress are

- pre-structural,
- unistructural,
- multi-structural,
- relational, and
- extended abstract.

These levels (or *ramps* as we call them) can be and often are adapted to the SOLO design when used in the classroom. In our work as teacher educators and former high school teachers, we have adapted SOLO for the design of rubrics, **progress guides**, and other visual scaffolds to assist student learning. We have also found it useful to add nuance to some SOLO levels (for example, levels prior to pre-structural) to better represent and support students who are struggling to get on task. We have found that some students are not yet ready to start the task and it helps to map our specific feedback strategies in these equally important **zones of proximal development (ZPDs)**. Similarly, we have modified SOLO-type guides when students are in different places within the same level. Key to any representation of students' work on a continuum is that it be developmentally sensitive and sufficiently nuanced to uncover the next steps within and between levels (Wilson, 2005, 2009; Wilson & Sloane, 2000).

Following Vygotsky's (1978) insight that education is a process of discovering and learning to close the gap on ZPDs, the levels of the SOLO taxonomy allow us to see junctures, pathways, and on-ramps. These sorts of taxonomies move us closer to dynamic pathways for multiple learning goals that evolve over time.

The SOLO taxonomy (Figure 1.2) is a general theoretical framework used in assessment contexts to describe, characterize, or hierarchically organize student responses to cognition-related performance tasks. As learning progresses, performances become more complex, as do feedback opportunities and demands in terms of directionality, configuration, and modality. We discuss these three major focal points of feedback more in later chapters. For now, it is important to note that feedback can and must be differentiated by its directionality (Chapters 2–4), configuration (Chapters 5–7), and modality (Chapters 8–10) and that one size does not fit all.





Source: Graphic based on model first described in Biggs, J. B., & Collis, K. F. (1982). Evaluating the quality of learning: The SOLO taxonomy (structure of the observed learning outcome). *Educational psychology series*. Academic Press.

Of its many useful features, the SOLO taxonomy allows us to set learning goals and develop concrete feedback tools, processes, and practices during and across lessons. When coupled with **graphic organizers** such as rubrics and progress guides, it operates at a grain size that students, teachers, and paraprofessionals can use and make sense of during instruction. Popham (2007, p. 80) writes,

Grain size refers to the breadth or scope of something. For instance, in the case of a curricular aim, a large grain size would be a significant, long-term goal that might take a full school year for students to reach. A curricular aim with a smaller grain size would be an instructional objective that students can achieve during a single classroom session.

The modified SOLO taxonomy operates at a grain size that makes it adaptable to rubrics, progress guides, and other means for assessing where students currently are and where they can go next (with assistance). Using SOLO-type taxonomies with well-designed progress guides can serve as a means of classifying larger learning outcomes in terms of their complexity while enabling us to offer meaningful specific feedback on students' work. Whether we are teaching and learning on the playing field, in the science lab, at the theater, or in the classroom, these approaches focus us all on progress and the process of growth.



For feedback to matter, it must include artifacts, scaffolds, and mechanisms in the classroom learning experience that are anchored in learning criteria. These learning criteria must move beyond abstraction or aspirations and lean into the work of making **feedback loops** and pathways visible to our students. Ramaprasad's (1983) work reminds us to consider feedback in terms of inputs, outputs, and processes. We follow this insight throughout this book.

## Identifying Meaningful Activities, Rich Tasks, and Authentic Projects to Enrich Feedback Practices Rich, Authentic, Complex Tasks Matter

Purpose-driven feedback goals must be mapped with a set of tasks, projects, and other work products that allow students to grow, progress, and find their ZPDs in the subject content matter. Whether we adopt an elaborate standards-based curriculum or use carefully chosen elements of Webb's DOK taxonomy, identifying meaningful activities will form the foundation for authentic learning. Without rich, meaningful tasks in a lesson and unit, we will know the destination but miss the mark.

Rich, meaningful tasks are complex to design and sometimes difficult to enact. These tasks require sustained effort by our students, opportunities for revision of **first drafts**, and a set of collaborative skills that call upon the whole learning community (Darling-Hammond & Adamson, 2014; Guha et al., 2018). We know from years of experience in schools that emphasize real-world immersion and learning by doing that these richer, more complex tasks require many exchanges of, as Ramaprasad (1983) calls it, "information." Feedback is, at its heart, the exchange and production of such information.

Rich tasks embedded in the curriculum may include science labs, persuasive essays, electronic art installations, propaganda posters, travel log webpages, research papers, choral performances, track and field events, software programs, videos, and so forth. No matter the design or format, each task requires that our students practice feedback—for themselves and for others—in our company as educators.

Many standards-based professional associations have embraced the move toward authentic assessment across a variety of subject disciplines. The National Science Teaching Association, quoting experts in performance task design (Stoll & Schultz, 2019, p. 40), notes that

Performance tasks enable teachers to gather evidence not just about what a student knows, but also what he or she can do with that knowledge....Rather than asking students to recall facts, performance tasks measure whether a student can apply his or her knowledge to make sense of a new phenomenon or design a solution to a new problem. In this way, assessment becomes phenomenon-based and multidimensional as it assesses both scientific practices and content within a new context.

As we move away from traditional testing, the purpose of assessment begins to shift. Instead of only measuring students' performance, we also strive to create an opportunity for students to learn throughout the process. Not only are students learning more as they are being assessed, but the feedback you gain as a teacher is far richer than traditional assessment. . . . This allows teachers to gather more information about what students do and do not know in order to better inform meaningful next steps in their teaching.

Similarly, those committed to PBL have consistently argued for the role of meaningful, long-cycle assessments that engage children and young adults in real-world, authentic learning. Students working on a project that engages them in solving a real-world problem or answering a

complex question over an extended period-from a week up to a semester-is key (Dewey, 1900/1990, 1902, 1916; Kilpatrick, 1918; Knoll, 1995; Waks, 1997). These authentic projects often lead to the creation of a public product or presentation for an audience. This engagement with adults outside the school allows students to not only demonstrate subject matter competence but also to put their critical thinking, collaboration, creativity, and communication skills on display.



but the adoption of intellectual initiative, discussion, and decision throughout the entire school corps. The remedy of the partial evils of democracy, the implication of the school system in municipal politics, is in appeal to a more thoroughgoing democracy.

Source: Dewey (1903), p. 196, italics added.

Experts have noted that while PBL has become more widely used in schools and other educational settings, there are key characteristics that differentiate "doing a project" from engaging in rigorous PBL. The PBL Works (2022) website, sponsored by the Buck Institute for Education, states:

We find it helpful to distinguish a "dessert project"—a short, intellectually-light project served up after the teacher covers the content of a unit in the usual way-from a "main course" project, in which the project is the unit. In Project Based Learning, the project is the vehicle for teaching the important knowledge and skills students need to learn. The project contains and frames curriculum and instruction.

In contrast to dessert projects, PBL requires critical thinking, problem solving, collaboration, and various forms of communication. To answer a driving question and create highquality work, students need to do much more than remember information. They need to use higher-order thinking skills and learn to work as a team.

Backward design, also called *backward planning* or *backward mapping*, is a process that educators use to design learning experiences and instructional techniques to achieve specific learning goals. Backwardmapping curriculum is a critical step in planning a rich set of tasks for an instructor's course or department. Whether using state standards mapping or well-vetted design principles laid out by experts in performance-based assessment, PBL, or real-world immersion activities, we see feedback mechanisms and processes as the place where the proverbial rubber hits the road.

Wiggins and McTighe (1998) have laid out the fundamental rationale and principles for teachers who think through their curriculum. Because they encourage intentionality during the instructional and assessment design process, lesson and unit planning requires a continual revisiting of the purpose of teaching something *before* implementing it into the curriculum. They write:

Deliberate and focused instructional design requires us as teachers and curriculum writers to make an important shift in our thinking about the nature of our job. The shift involves thinking a great deal, first, about the specific learnings sought, and the evidence of such learnings, before thinking about what we, as the teacher, will do or provide in teaching and learning activities. (2005, p. 15)

How we design, plan, execute, and monitor our formative feedback practices is essential for deeper equity in today's classrooms. To engage and support our students through complex, long-cycle tasks, projects, and assignments requires focused and sustained effort from everyone. We as teachers must design many opportunities for revision and conversation about progress and plan for ways to uncover and make sense of feedback skills, disposition, and habits.

These sorts of richer, more complex performance-based tasks require frequent exchanges of information between teachers, peers, and self. Performance tasks embedded in the curriculum may include projects, social media blogs, installations, posters, software code, research papers, art and music performances, videos, and so forth. But in each case, these instructional and assessment products must be supported by feedback processes if there is to be any hope for formative assessment playing a role in our students' development and growth.

Evidence of **deeper learning** depends on an array of rich tasks (Darling-Hammond et al., 2020), but such evidence cannot be discovered without a feedback-rich learning environment in which information flows freely and consistently. Feedback practices are the link to equity and excellence.

## Right-Sized Feedback With a Progress Guide: Between Rubrics and a Hard Spot

Advocates for performance assessment and PBL often point to rubrics for evidence of learning goals and success criteria. But too frequently, rubrics are flawed—sometimes by design, other times from a failure to implement. When the goal of one's assessment practice is the generation of right-sized formative feedback for students to use to improve their work, rubrics can be especially problematic. This is because rubrics often contain "dysfunctional detail" (Popham, 1997). Dysfunctional detail makes rubrics awkward and difficult to use for both teachers (when looking at drafts of student work) and students (when self-assessing their work).

Students and teachers can only juggle so many elements at once and therefore need a streamlined, focused document when they are formatively assessing work. Processing power consumed by the dysfunctional detail of a rubric drains brain power and distracts teachers who would be better served by figuring out and articulating appropriate next steps for their students. Too often, rubrics get in the way of timely, specific, flexible feedback.

In the chapters ahead, we will introduce an innovation called the *progress guide* that we have used to build a bridge between rubrics and other tools for making sense of next steps. The **big idea** that animates the progress guide is that it allows students (and teachers) to focus on next steps along a strand of the current work-in-progress to make just-in-time adjustments before summative judgment (i.e., marking and **grad-ing** periods). We will share many examples from different projects, but here is one to help visualize the structure and function of progress guides. Figure 1.3 depicts a "Using Evidence" **exemplar** of a progress guide connected to an argumentation rubric.

	MY PROGRESS GUIDE	
Current Level (Circle)	I Can	Next Steps to Revise My Draft
****	Weigh evidence	Now I need to
***	Add some evidence	Now I need to
**	Take a position	Now I need to
*	Restate	Now I need to

#### Figure 1.3 Progress Guide: Using Evidence to Support My Claim

Source: Courtesy of Validity Partners LLC © Do Not Circulate without Permission.

online Available for download at resources.corwin.com/ContinuousImprovement

A progress guide is an excellent supplement to a well-designed analytic rubric since a progress guide, by definition, has already prioritized what is most important to focus on in a piece of student work or a performance. This is the case whether it is the teacher using the progress guide to give feedback to the student or the student using the progress guide to generate next steps feedback for a classmate (or for themselves). We introduce the notion of the progress guide in Chapter 4 with several examples of its uses in the remaining chapters.

In many cases, **English learners** (ELs) and students with special needs can benefit from a "less is more" approach. Rubrics can pose unnecessary barriers to learning how to learn; a progress guide offers a supportive on-ramp to help students gauge where the draft is and what may be next to improve it. Less extraneous verbiage means ELs and students with special needs can dedicate more time and resources to understanding next steps, the essence of formative feedback for all. Tools such as the progress guide focus on drafting, revising, and rethinking "the current work" rather than gaming "the system" for points.

Our solution to the problem of right-sized feedback—the use of progress guides—is simple without being simplistic. We will discuss how to utilize progress guides for PBL and performance task design to keep the focus on feedback loops rather than grades and points. And we will invite everyone to design their own progress guides in places it makes sense for their own curriculum and classrooms.

For now, we note that a set of progress guides that align with a well-designed analytic rubric rooted in standards/learning criteria is a crucial feature of feedback-rich assessment and instructional design. We know formative feedback works when students are invited into the flow of the learning with footholds, checkpoints, and scaffolded processes that reveal both what is ahead and how far we've come. As we will discuss in the next chapter, teachers, peers, and students themselves can mark progress and identify next steps in the learning trajectory. Progress guides must play a role in the process of defining what's next and how to get there.

But first, a word about cycles of feedback, which are too often taken for granted. Yes, it is essential to use well-defined frameworks, standards, and criteria for purpose-driven feedback. It is equally essential that students engage in rich tasks, authentic performances, and meaningful assignments so they can exercise the habits of mind and work required for 21st century learning. To do this well, though, we must set everyone up for success in long and short cycles of feedback that weave across units of instruction.

## Ensuring Long and Short Cycles for Feedback Practices

The timing of feedback matters. We all know this. The cycles and rhythms of feedback must occur frequently to mark and support progress on a continuum of practice. We tell our students, "Everything in due time" as they struggle to reach the next level in an activity. We tell them, "Be patient" with this project or task. "Trust the process." We remind them again and again in the flow of learning, "You don't know how to do that—yet."

But we must also use time to everyone's advantage. The art of formative feedback is in its timing. And time is limited.

Our feedback practices must reflect the rhythms of performance task creation and project-based work as each evolves and unfolds over time. This respect for process (and product) allows us to examine and embrace the distinct and intersecting sets of shorter and longer feedback loops that occur in places where information flows. We've come to realize that it's all about information flows. The question is, how do we make space and time for these exchanges?

## Short-Turn Cycles of Feedback

The time available to offer, process, and incorporate feedback can be brief. The information transfer rate is short and often informal. It can occur in "short turns" of talk, accompanied by verbal and nonverbal communication. We see teachers leaning in, dropping by, huddling with their students to offer quick suggestions and comments. Teachers engaged in short-turn cycles of feedback do it because they see they can make a difference.

These flows of information are essential to sizing up where we are and where we are going next with the work. No matter the academic subject, students rely on our just-in-time interventions to advance their progress. They appreciate the time and care it takes to attend to their work-in-progress. Experts outside of education also note:

"Just-in-time" is a management philosophy and not a technique. It originally referred to the production of goods to meet customer demand exactly, in time, quality and quantity, whether the "customer" is the final purchaser of the product or another process further along the production line. It has now come to mean producing with minimum waste. "Waste" is taken in its most general sense and includes time and resources as well as materials. (Institute for Manufacturing, 2016)

No matter what we produce, make, or create, virtually every working adult knows that effective teamwork is essential. To be effective, we try to use our time efficiently and productively. The idea of wasted time or resources is not foreign to feedback. People become frustrated and disparaged when they feel that their feedback is useless or too little too late.

To move forward, we all require guidance (both individually and in smaller groups). As we work on projects, assignments, and performance tasks together in a classroom, time must be on our side. From the first draft to the final product, there is an expectation that we can get this done in the time that remains before the deadline. We must have some degree of hope that the proverbial mountain can be climbed. One needs faith in the guide on the side as well, which is why we have written this book.

To get things done in the work world, we need feedback, often in the moment and at multiple times in the life of the project. Why should it be different for students in our schools who are engaged in authentic real-world projects and complex tasks? As teachers who are leading our students, we need to anticipate, be ready for, and expect to provide quick taps and gentle nudges to keep everyone moving forward. These may happen with a **pause** in the lesson, an unexpected but teachable moment, or a pivot of "turn and talk to your partner" to see what the students think is next. Just-in-time feedback **moves** from all directions are essential to supporting our students engaged in the work of deeper learning.

## Long-Turn Cycles of Feedback

In other cases, what we will call *long-turn cycles of feedback* are part of the menu. The time to offer, process, and incorporate particular types of information (such as teacher-driven, peer-to-peer-driven, or self-driven feedback) takes longer. These feedback loops can extend over days, weeks, or even months depending on the task, project, or assignment.

These long-turn exchanges are usually written as comments, suggestions, and notes; they may also be supported by verbal and nonverbal feedback routines, which take time. In these cases, our students will rely on clear protocols for engagement (and re-engagement) with these longturn cycles on a visible, mutually agreed-upon timeline. They will also need to know the destination and the various on-ramps and routes to success. As we've said, learning goals matter for purpose-driven feedback to work over time.

As guides on the side facilitating longer-term projects, performance tasks, and assignments, our students need to know our expectations and how these are aligned with well-defined learning goals and outcomes. Our students also need to receive consistent messages about success criteria. The message of "Where are we now and where are we going next?" must be connected to a visible workflow where feedback is produced, acknowledged, and resolved.

Why? Because the world of work and higher education also moves to the rhythms of long-turn feedback cycles and exchanges of information. People are expected to track, monitor, and fully incorporate information as they produce together as a team and against real deadlines. Teachers, much like team leaders in the workplace, are in a unique position to lead and support their students. Today more than ever, teachers must anticipate "production" bottlenecks, be ready for proverbial "supply chain" disruptions, and know how and when to apply gentle but persistent pressure to keep everyone moving forward.

Each of these cycles—long and short turn—has its place in weaving a coherent set of feedback practices. By thinking through our feedback practices and protocols through a backward-design process in the curriculum, we can ensure that we use everyone's time well. Experts and seasoned practitioners know that deeper learning only occurs when timely and persistent feedback occurs with such cycles and exchanges of information.

## Intersecting Feedback Loops With a Shared Project

Long- and short-cycle feedback loops intersect over the life of any schoolbased, department-based, or classroom-based project and extended performance task. These loops represent a production process, one that we can articulate to others within and outside of our schools. At the center of the commitment to feedback-for-all is the notion of a shared project, one that we plan for with our students. Students and teachers must join together in these shared projects, tasks, and assignments so that both can feel the power of authentic learning as a team. Feedback loops are key to the success of these efforts. But we have to make them visible first.

One way to envision an effective, robust feedback loop is to consider how it evolves as a process that gains purchase over time. We want to get traction on the shared project. Thinking through the work process and project cycle with our students as partners is key. Figure 1.4 shows the five major components or phases that students should be aware of before embarking on a performance task, project, or assignment. Each phase can serve as a checkpoint and, if necessary, as a stopping point to discuss norms, adjust as needed, and evaluate what's next for the class.

We use the example of "evaluating a project" to delineate the markers and goals for the cycle of a feedback loop, but there will likely be many iterations and subroutines within and between components/phases. That is why we say classroom assessment is an art as much as a science (National Research Council, 2001). This schema helps students, teachers, and paraprofessionals alike to see the big picture.

#### Phase 1. Setting a Purpose

To open the **formative feedback loop**, we must first define the purpose of a shared project. Students are invited into the project as partners in its resolution. They have a stake in the project and can see their own work as essential to the success of the unit.



Figure 1.4 Formative Feedback Process Model

## Phase 2. Agreeing on Goals

Every project must have an end goal that is known from the outset. Teachers will often show exemplars and/or samples of exemplary student work to help students visualize the destination. The exemplars are polished but the samples can be rough. Whatever the case, each student in the class must see how the work-in-progress will become the final project.

#### Phase 3. Developing First Drafts

Once the parameters for the shared project have been agreed upon and the course set in terms of time, resources, and materials, we begin the process of testing our ideas (what we call *first drafts*). At this point, the feedback loop is open; it includes our first drafts and all our attempts to get started with the project. We can break down components of the project, differentiate the skills required for it, and put in place the required supports and scaffolds. But getting everyone started is essential to equity-driven work in today's learning environments.

Key to monitoring, uptake, and momentum is the iterative cycle of drafting with all our students, however incomplete or nascent the drafts may be at the outset of the project. If students cannot or have not yet iterated a response with themselves, with others, or with us as mentors, then the feedback loop stalls or collapses into familiar expressions of frustration: "I am stuck" or "This is stupid" or "She never pays attention." These expressions are normal, even healthy, from a developmental perspective. Our students are novices, not experts. But these are not signs of a doomed project. They are evidence of students learning to draft and revise. Authentic assessment and projects are messy work; everyone needs to pause, honor, and acknowledge: "It's okay. We are learning by doing-together."

The disposition to test one's ideas in front of others is a risky thing. Students are not always eager to take risks. Their experience of making a mistake, failing, or producing less-than-perfect results are often anchored in entirely negative contexts. Some may ask us, if all that matters are the points on a rubric (which lead to the final grade), then why iterate at all?

Too often at this stage, the project loses its intrinsic value and the students lose their internal momentum: They stop seeing their work as "in progress" and instead prepare themselves for a final judgment. Focusing on a graded outcome short-circuits our students' motivation to use feedback to grow, stretch, and change.

Any authentic project that involves kids generating their personal best over a period of time for a complex assignment is going to involve communication. With communication comes breakdowns. But there is hope. This is part of a cycle-Phase 3 to be exact. It is important to prime everyone: When we provide feedback, we respond to what we see at this moment. There will be several iterations, from first draft to the final project.

## Phase 4. Planning Next Moves

We need robust information exchanges to check for mutual understanding. They are characterized by phrases such as:

- "What I see is..." "What we are working on is . . ."
- "A next step might be . . ."
- "If I try this, then . . ."

Each of these **sentence starters** brings us a step closer to the "plan forwarding" aspect of assessment for learning. In this context, a progress guide is an anchor: It allows us to visualize, discuss, and break down next steps.

In one-on-one conversations with our students, we will look at initial writing samples, spreadsheet results, research findings, video clips, drawings, media objects, physical movements on the court or field, and warm-up routines. We must ask ourselves, as guides on the side, what we will use to guide our comments, suggestions, and questions (that is, feedback!) about those drafts as they emerge over the project cycle.

Teachers' formative feedback, similar to peer-to-peer or self-directed feedback, is effective when it is broken down into manageable chunks of information. That information must be anchored in a continuum: at the proper grain size and with the appropriate **academic language** for students. Planning next steps on a project or performance task is impossible if we don't know where we were in the last draft and where we plan to be in the next one. Moreover, without exemplars and progress guides to serve as signposts, it will be difficult to evaluate progress and next steps.

#### Phase 5. Evaluating the Project

Closing the formative feedback cycle is as important as opening it. We need routines for reflection. In some instances, we will use a formal rubric, **scoring guide**, or some other evaluative tool to assess the quality of the student work. In other instances, a simple debrief or informal self-reflection on the project helps everyone learn how they did, where they got stuck, and how to improve stewardship of the next cycle.

The right amount of feedback at the appropriate time, in an accessible academic language **register** rooted in progress guides, matters. The Formative Feedback Process Model represented in Figure 1.4 draws everyone's attention to how they will work together while each person produces their own project for the unit or semester. Phases 3 and 4 of any authentic performance task, project, or assignment are where the action is. But Phases 1 and 2 are where it starts. Effective feedback is purpose-driven and anchored on LGs and well-articulated progressions.

## Check for Understanding/Self-Assessment

Well-articulated on-ramps—when anchored in purposeful feedback tools, artifacts, and processes—are as important as the destination. The roadmaps and on-ramps that form our educational goals and purposes are many. Some researchers have turned to the concept of **learning progressions** in subject disciplines to understand pathways to success (Alonzo & Gotwals, 2012; Claesgens et al., 2009; Duncan & Hmelo-Silver, 2009; Heritage, 2008). We note that whatever theory of student learning accompanies our educational goals, identifying footholds, bottlenecks, and just-in-time feedback that moves everyone forward is the next step for ensuring continuous improvement in our classrooms. We must design so-called embedded assessment experiences that engage critical thinking, ensure revision, and work across the curriculum to elicit students' habits of mind. This is the ongoing educational journey toward excellence and equity that DuBois calls the "freedom to learn" (Foner, 1949). It requires us all to work to advance all students with respect and care.

Take a moment to consider the reasons why you have adopted other people's standards, objectives, and learning goals in the past. (Maybe you've used Webb's DOK or state standards or learning progressions.) Did you borrow or adapt others' ideas to fit your classroom or department's values? How do these choices promote your educational goals for students in your daily care?

## Reflect

Which standards, course objectives, and learning goals currently matter the most to you? Are particular documents (e.g., curriculum frameworks, taxonomies, syllabi) useful to you? What about the educational goals in these documents appeals most to you? How do these educational goals connect to the kinds of purpose-driven formative feedback we've discussed in this chapter?

### **Self-Assess**

**Instructions:** Put a check mark by the level that best describes the current state of your instructional and assessment practices as a teacher responsible for providing students with clear, well-defined learning goals.

SOLO LEVEL	DESCRIPTION	PUT A √ MARK
Extended Abstract	I have research-informed, clear, visible, and consistent learning goals (LGs) embedded in my class for all performance tasks, projects, and long-term assignments.	
	I can differentiate my feedback tools and feedback processes within and across lessons and adapt to kids, contexts, and subject-based demands.	
Relational	I have a set of coherent learning goals (LGs) that incorporate practices, tools, and procedures across each part of my curriculum.	
	I can refer my students to a system (e.g., Figure 1.4) for producing and evaluating drafts using different configurations, modalities, and directionalities of feedback.	
	I use a combination of long- and short-cycle feedback protocols to ensure students are processing, incorporating, and owning next steps.	
Multi-structural	I have many different learning goals (LGs) and use feedback (e.g., various practices, tools, or procedures) as regularly as possible.	
	I activate students as owners of feedback to position them to take next steps before accepting final work.	
Unistructural	I try to give feedback before major assignments are due.	
	I typically use the same feedback tool format (e.g., rubric).	
Pre-structural	I don't usually give feedback before I grade.	
	My grades are feedback on how students are doing.	

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Learning goals founded in purpose-driven feedback routines and processes must be visible, tangible, and actionable for all. When you observe a classroom and see students working in schools immersed in feedback-rich environments, they can tell you what specific tools and procedures are guiding them. They can orient you to where they are now in the cycle. These students in reform-driven schools give and take feedback; it's part of the learning process as they build up their understanding of the task or project.

Because these orientations and habits are articulated in the work of student learning, during lessons and across units of instruction, there is alignment between adult aspirations (also called *habits of mind, content standards*, and *21st century skills*) and the students' experiences. We must remember: Students from myriad linguistic, cultural, and socio-economic backgrounds are working with us as apprentices to make sense of our aspirations. Our goals and purposes for schooling may not (yet) be theirs.

Purpose-driven feedback is fundamentally a form of student-centered assessment that treats the learning and assessment experience as positive and mutually reinforcing. When our students are given information about progress through an array of feedback practices, they can communicate with us *when* they experience setbacks and feel stuck. Together, we can then rethink what it takes to move forward. Progress is made as a team in a community of learners.

The wisdom of a former co-principal of CPESS guides us today as much as yesterday: David Smith was fond of saying "You may not know that—yet" (Wulf, 1997). That is, our students' right to learn goes hand in hand with our duty to make feedback essential to what makes a good education—for them and for us. It is the collaborative, **dialogic** nature of feedback when centered on rich tasks and authentic activities that places students on an equal footing with each other, with us, and with their mentors (Lieberman et al., 2007).

Our book is written to inspire the current and next generation of educators to take the feedback challenge—together.

## **Recap/Review**

- Equity and excellence in education demand we place feedback practices, strategies, and moves at the center of learning and teaching experiences.
- Having a formative feedback framework (Figure 1.1) allows us to focus on intersecting dimensions of practice and to plan for combinations of feedback practices more systematically.
- Clear, well-defined, and meaningful learning goals can be drawn from various taxonomies such as Bloom's, Webb's, or SOLO, but the focus must remain on progress.
- Rich tasks, complex projects, and extended assignments require deep feedback processes and cycles to support student achievement.
- Success criteria and learning goals must operate at a grain size that focuses on growth and development during the feedback cycle (short or long).
- Feedback that is timely and relevant can provide useful information about the gap between the actual level and the reference level (next steps) of performance.
- Progress guides, aligned with analytic rubrics, allow all stakeholders (students, parents, staff) to know where a student is, where they are going with assistance, and what is to be done at the task/project level to move ahead.
- A mental model such as the Formative Feedback Process Model (Figure 1.4) of the process for supporting and sustaining formative feedback loops helps the teacher and students work together to improve performance.

# Ticket Out the Door: What Are Your Goals?

For some, the purpose of schooling is to help students prepare for a career in the 21st century. In a competitive global economy, with shifting priorities and ever-changing demands, learning to work collaboratively, to offer and receive feedback, and to sustain effort across multiple projects will be essential for a good education.

For others, the purpose of schooling is related to higher education. In that case, helping students do their best in college is the daily goal of our academic work. We value deeper learning because it instills a lifelong commitment to personal and professional development.

Professional advancement for our students requires subject matter competency in everything from science, math, and art to music, history, economics, civics, and world languages. We believe that a willingness to engage and re-engage in lifelong learning in a particular field of inquiry or subject discipline while acquiring habits of mind, heart, and work (Meier, 1995) are what make a good education. Feedback is key to all of these aspirations for our children and young adults.

Luckily, for most of us today, some combination of these fundamental goals and purposes will define our work in the classroom. As we prepare students for work and college, feedback will play a critical role. To make the promise of feedback work, we will need feedback to be personally fulfilling and culturally responsive for everyone.

Good formative assessment practice, which has always included feedback practices, routines, and moves, is a fundamental purpose of schooling. No matter how much policy chatter we hear or posturing we witness, we can never ignore and must never forget that children deserve the right to learn. Feedback is a sacred duty that helps fulfill that right.

As you go ahead with us on this journey, take a moment to reflect:

1	Why do eventioned and equity in education matter for you and
	your classroom?
	N`
	$-0^{\circ}$
	$\bigcirc$
	How does feedback play a role in making these two core educational
	most importantly, to all our students—particularly those who are
	fighting daily for the right to learn?

S. How will deepening your feedback practices in your classroom and school bring equity and excellence to life? For whom in particular?

These EQs will accompany us as we move ahead. Now that you have a big-picture view of how to think about the features of learning goals, tasks, timing of feedback, and feedback cycles/loops, we will move into the work of understanding how feedback directionality, configurations, and modalities make a difference in student achievement.

