

Identifying High-Leverage Practices for Guiding the Development of Teaching Assessments

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Abstract

This report identifies eight high-leverage practices (HLPs) for teaching that are intended for use in guiding the development of a next generation of teaching assessments. The identified HLPs are drawn from an existing framework that provides empirical and theoretical research backing for 34 HLPs that make up the work of teaching. The report describes the methods used to select a subset of eight HLPs and provides initial recommendations for the assessment methods that are most appropriate for each of these eight HLPs.

Keywords: teaching assessment, performance tasks, high-leverage practices

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Author Note

This work was supported by the Praxis Program at ETS.

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Introduction

The Praxis program at ETS has historically emphasized teacher assessments that are primarily used for making high-stakes decisions on admission to educator preparation programs and for granting teaching licenses. These assessments have primarily focused on assessing teachers' content knowledge for subjects such as mathematics, English language arts, social studies, and science. Recently, however, there has been growing interest in expanding and shifting the focus of Praxis assessment from emphasizing teacher knowledge to assessing the

teaching practices that make up the work of teaching. This interest in assessing practice has included calls to move beyond a focus on high-stakes assessments to assessments that can be used formatively to support teacher learning.

To support the first stages of work to develop a next generation of teacher performance assessments, we set out to identify a small set of teaching practices for the purpose of focusing development efforts and clarifying appropriate assessment methods and use cases. We focused on answering the following questions to identify these teaching practices.

1. What teaching practices make up the work of teaching?
2. Which of these teaching practices are a good starting point for developing a new generation of teaching assessments?
3. What are promising methods for assessing these teaching practices?

To help shape the process for identifying an initial set of teaching practices, it is useful to draw on efforts in teacher education to shift the focus from teacher knowledge to teaching practice. Grossman et al. (2018) describe this shift as “a turn away from an intense focus on the knowledge needed for teaching to a focus on the use of that knowledge in practice. The fundamental goal undergirding this turn is to better support teachers in learning to enact teaching practices skillfully and knowledgeably in ways that support student learning” (p. 3).

To support this turn to practice, teacher educators have recognized the need for criteria that can be applied to conceptualize and identify meaningful teaching practices and then for frameworks that organize the most critical practices to emphasize as part of teacher preparation. Grossman et al. (2009) provided one set of criteria, arguing that “high-leverage practices” (HLPs) are ones that: “occur with high frequency in teaching; novices can enact in classrooms across different curricula or instructional approaches; novices can actually begin to master; allow novices to learn more about students and about teaching; preserve the integrity and complexity of teaching; and are research-based and have the potential to improve student achievement” (p. 277). These criteria highlight the need to provide appropriate backing to justify that a practice is central enough to be considered high leverage, justification for how these practices function, and information on how they can be used to support teacher learning.

Teacher educators have started to build on these and other criteria to propose a variety of approaches to both conceptualizing and identifying HLPs. Some of the resulting frameworks

have focused on identifying the HLPs that are used to teach a particular subject, such as mathematics (Franke et al., 2007), science (Kloser, 2014; Windschitl et al., 2012), English language arts (Grossman et al., 2013), or history (Fogo, 2014). Others have focused on a specific population, such as students with learning disabilities (McLeskey & Brownell, 2015). Others still have identified HLPs that are more general and can be applied regardless of grade level or subject (Ball & Forzani, 2011). Each of these HLP frameworks represent a different development approach. Some are derived primarily from a synthesis of research literature and prominent teaching standards. Others rely heavily on input from teachers, teacher educators, and other experts. Each is shaped by a vision of how the HLP framework will be used and for which segment of the teaching population.

Like the HLPs developed for teacher education, HLP assessment frameworks can benefit from adherence to criteria that help to justify their use in large-scale assessment and their relevance to the work of teaching. To guide our initial review and selection, we propose that assessments of HLPs for teaching should be:

- Situated within a broad and comprehensive view of teaching competency so that it is clear what features of teachers' work are addressed by the HLP assessments and which are not
- Limited to a subset of competencies to facilitate a more focused and feasible assessment program
- Relevant across state and local contexts, subject matter, grade level, and approaches to teaching so that they can be widely adopted and used
- Backed by research to justify the expense and stakes associated with developing and administering practice-focused assessment tasks
- Valid for use in assessment, with special attention devoted to maintaining the integrity and complexity of teaching

This document provides an account of the approach that we used to both attend to the above criteria and select an initial set of HLPs as the focus for teacher assessment. We start by describing a competency framework that identifies the practices that make up the work of teaching. Next, we describe the process used to select a smaller, initial set of eight HLPs as the

focus of assessment development. In the subsequent sections we describe these practices and provide an overview of promising assessment methods that could be used to provide evidence for each of the HLPs.

Teaching Competency Framework

Sykes and Wilson (2015) conducted a literature review and synthesis to map the competencies that make up the work of teaching. The primary purpose was to draw on a wide range of relevant research literature to propose a research-backed framework that both captures the breadth and key components of teaching practice, and that can be used to guide teacher preparation, policy, and assessment. The competency framework includes two broad domains, one focused on instruction and the second on professional roles and responsibilities. These two broad domains are further decomposed into a set of nine components which are further specified by 34 elements (Figure 1).

Figure 1. Domains, Components, and Elements Comprising the Teaching Competency Framework

Domain I: Instruction	Domain II: Professional Role Responsibilities
Preparing and planning for high-quality instruction • Drawing on students' cultural, family, intellectual, and personal experiences and resources • Promoting community participation as opportunity to explore core values • Setting long- and short-range learning goals and objectives • Mastering lesson content for instructional purposes • Selecting and adapting resources for use in instruction • Selecting/designing instructional tasks, activity structures, and formats • Planning assessments	Collaborating with other professionals • Using professional networks • Communicating professionally, both in person and via technology • Collaborating in professional learning communities and on teams • Exercising leadership, both formally and informally
Attending to relational aspects of instruction • Developing caring and respectful relationships with individual students • Attending to and promoting student social and emotional needs and learning • Building positive classroom climate	Working with families and communities • Fostering two-way, respectful communication with parents and guardians • Using family- and community-related information as a resource for learning

Establishing and maintaining the social and academic culture • Implementing organizational routines, norms, strategies, and procedures to support a learning environment • Managing the physical and material environment • Managing instructional groupings • Using time productively	Fulfilling ethical responsibilities • Enacting the basic moral principles and duties associated with the role of teacher and exercising diligence and prudence in observing these duties • Responding to ethical dilemmas with sound reasoning and actions • Detecting and correcting biases of various kinds via reflection and feedback • Advocating appropriately for students
Interactive teaching • Attending to instructional purposes • Enacting instructional tasks and activities • Engaging students with subject matter • Orchestrating productive discourses • Providing strategy instruction • Assessing and responding to student learning during instruction	Meeting legal responsibilities • Complying with all relevant laws and regulations • Creating and maintaining accurate records of student progress and related matters
Engaging in instructional improvement • Improving instructional routines • Engaging in deliberate practice	

Note. Reprinted from “How Teachers Teach: Mapping the Terrain of Practice,” by G. Sykes and S. Wilson, 2015, Educational Testing Service, p. 5.

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The nine components in the competency framework, which are bolded in Figure 1, provide a comprehensive map of teachers’ work. In Table 1 and Table 2, we briefly describe each of the nine components drawing from Sykes and Wilson (2015).

Table 1. Five Components of Instruction in the Sykes and Wilson (2015) Competency Framework

Component	Description
Preparing and planning for high-quality instruction	This component includes “the work that teachers do to select and organize the main elements of teaching in order to achieve desired effects on learning. This includes both individual lessons and sequences of lessons that require coherence and unity around the logical development of academic material, 21st century skills, and social and emotional goals, as well as the learning progressions through which students master such material” (Sykes & Wilson, 2015, p.20).
Attending to relational aspects of instruction	“The research literature related to this component orients around (a) students’ social, emotional, and academic needs and interests, as the fulfillment of these needs influences student engagement and motivation, and ultimately student learning and development, and (b) the teaching of social and emotional learning as outcomes in and of themselves and as supportive of academic learning . . . These needs form a complex nexus of factors that combine to support students’ academic engagement and success, while also serving as goals in themselves, part and parcel of the larger goal of fostering positive human development” (Sykes & Wilson, 2015, p.39).
Establishing and maintaining the social and academic culture	“Teachers encounter students in groups, unlike many other professionals who diagnose and treat clients who come to them individually. This basic fact introduces a powerful social dimension to teaching: the management of groups. This broad component includes practices associated with how teachers create a safe, harmonious, and productive classroom within which learning takes place efficiently, equitably, and to a high standard. . . . Contemporary approaches to the social aspects of learning emphasize a new construct—a community of learning—that emphasizes social processes and participation rather than compliance as essential to the ways that teachers create classrooms that encourage ambitious learning” (Sykes & Wilson, 2015, p. 45–46).
Interactive teaching	“This competency calls for teachers to bring three key elements together: (a) ways of engaging students, (b) in relation to students’ distinctive learning needs, as focused on (c) the purposes and goals of learning. . . . Because content is central to this competency, teachers induct students into the discourse and practices that are used in particular subject matters. They employ a balanced repertoire of discursive practices that range from more teacher-centered to more student-directed or centered” (Sykes & Wilson, 2015, p. 53–54).
Engaging in instructional improvement	An obligation common across professions is to work steadily to improve one’s practice and this work is associated with practices that extend from informal reflections to more formal and structured inquiries, work that teachers do on their own and in collaboration with others. In this work, teachers examine their current practice in various ways, determine aspects of their practice they want to improve and then select or create particular improvements that they try out, study, refine, and integrate into their ongoing instruction (Sykes & Wilson, 2015, p.74).

Table 2. Four Components of Professional Roles and Responsibilities in the Sykes and Wilson (2015) Framework

Component	Description
Collaborating with other professionals	“Teachers engage in a variety of ways with others [including] . . . using professional networks, communicating professionally, participating in teacher learning communities and teams, and exercising leadership” (Sykes & Wilson, 2015, p. 78–80).
Working with families and communities	“Teachers open and maintain regular, two-way communication in order to help families understand the instructional program; work with them to support a student’s specific progress; and engage them in learning activities aligned with the instructional program” (Sykes & Wilson, 2015, p.84).
Fulfilling ethical responsibilities	“Teaching has long been regarded as an essentially moral undertaking. The moral dimensions of teaching call on teachers’ manner or dispositions but also on their knowledge, understanding, and judgment, intersecting therein with competence. . . . While students constitute a primary touchstone for ethical responsibilities, subject matter also is implicated. Teachers must be faithful to the canons of disciplinary knowledge. They must understand and represent for students’ disciplinary virtues associated with the spirit of inquiry, the uses of evidence to support opinions and hypotheses, open-mindedness in considering ideas and perspectives of others, and related values. Teachers are loyal to their students, to the subjects they teach, and to the ethical dimensions of interaction between the two” (Sykes & Wilson, 2015, p. 87–89).
Meeting legal responsibilities	“Much law and policy in education serves to protect the interests of children. Consequently, it is imperative that teachers enact their legal responsibilities with respect to students’ rights and interests. This is fundamental to the injunction in licensure to do no harm” (Sykes & Wilson, 2015, p.93).

The competency framework is further broken down into the 34 finer-grained elements listed under each of the nine components in Figure 1. These elements are most closely aligned to the HLPs because they are defined at a level that is closest to the day-to-day and moment-to-moment work of teaching while still maintaining its integrity and complexity.

Selecting High-Leverage Practices for Assessment

We conducted an analysis of the 34 elements represented in the Sykes and Wilson (2015) competency framework with the goal of selecting a subset of eight elements to serve as the basis for developing assessments of HLPs. The decision to select eight elements was largely driven by practical considerations. We needed to limit the pool to a manageable number of elements given resource constraints, while also selecting a sufficient number of elements to represent a range of teaching practices. A target pool of eight HLPs satisfied a number of considerations in managing the balance between breadth and depth in the elements selected.

Our analysis involved applying expert judgment to sort the elements by importance, a common approach to supporting the validity of selected assessment framework components (see,

for example, American Educational Research Association et al., 2014, p. 14). A team of four ETS researcher scientists, consisting of the four authors of this report each with expertise in teacher professional development and teaching assessment, participated in the analysis.

The process we used was designed to draw on both individual and collective judgment to systematically come to agreement on the eight elements that are most critical to assess with the primary goal of supporting student learning, development, and success. We began by reviewing the competency framework to familiarize ourselves with the definitions and backing for each element or HLP.

Next, each scientist independently reviewed the 34 elements and selected a subset of eight elements that they deemed to be most critical. There was strong initial agreement among the team with 12 of the 34 elements selected by one or more of the scientists as most critical. Four elements were selected by all four scientists (e.g., Enacting instructional tasks and activities; Engaging students with subject matter; Orchestrating productive discourses; Assessing and responding to student learning during instruction). Four elements were selected by three of the four scientists (e.g., Drawing on students' cultural, family, intellectual, and personal experiences and resources; Mastering lesson content for instructional purposes; Selecting/designing instructional tasks, activity structures, and formats; and Building positive classroom climate). Four elements were selected by one of the four scientist (e.g., Planning assessments; Implementing organizational routines, norms, strategies, and procedures to support a learning environment; Engaging in deliberate practice; Enacting the basic moral principles and duties associated with the role of teacher and exercising diligence and prudence in observing these duties).

For the next stage of the analysis, each team member began by presenting a rationale to the full group for each of the elements they had each selected in the first round of review. Then the researchers independently conducted a second round of review focusing on just the 12 elements that were identified in the first round, again identifying their recommendations for the eight most critical practices. There was minor additional convergence after this second rating activity, with the team of scientists identifying 10 or the 12 remaining elements as most critical. Six elements were selected as most critical by all four scientists (e.g., Drawing on students' cultural, family, intellectual, and personal experiences and resources; Mastering lesson content for instructional purposes; Enacting instructional tasks and activities; Engaging students with

subject matter; Orchestrating productive discourses; Assessing and responding to student learning during instruction). Two elements were selected by three scientists (e.g., Selecting/designing instructional tasks, activity structures, and formats; Building positive classroom climate). Two elements were selected by one scientist (e.g., Planning assessments; Implementing organizational routines, norms, strategies, and procedures to support a learning environment). Finally, the eight top-ranked elements were selected as the focus for HLP assessment development (Table 3).

Table 3. Selected High-Leverage Practices for Assessment

High-Leverage Practice	Description
Drawing on students' cultural, family, intellectual, and personal experiences and resources	Teachers build connections with students and learn about student communities in ways that build relationships and capitalize on their experiences, interests, and funds of knowledge.
Mastering lesson content for instructional purposes	Teachers prepare for instruction by engaging with the lesson content that they are responsible for teaching. This involves making sure they understand the content themselves, thinking into their upcoming work with students, identifying possible areas of student confusion, and making relevant connections to prior and future concepts.
Selecting/designing instructional tasks, activity structures, and formats	Teachers select, develop, and adapt tasks for instruction. This involves considering tasks that have appropriate levels of cognitive complexity, accommodating differences in student ability, engaging a variety of student interests, and varying lesson and task formats to accommodate different instructional goals.
Building positive classroom climate	Teachers create and manage classroom environments to support productive student engagement and learning. They create positive classroom environments that foster student belonging and relatedness and establish positive expectations and social norms. They teach students how to interact positively with peers and the work of the classroom.
Enacting instructional tasks and activities	Teachers enact tasks and activities that engage students in productive interactions with instructional tasks, student peers, and subject matter. Teachers establish, model, and scaffold both routine instructional tasks and more cognitively demanding tasks designed to stretch students' understanding and skills.
Engaging students with subject matter	Teachers draw on their subject matter knowledge and knowledge of how to teach particular subjects to differentiate student learning opportunities based on learner characteristics. Teachers make content explicit in instruction, recognize and accommodate distinctive patterns of student thinking in subject matter domains, and provide appropriate instructional responses to meet students' learning needs.
Orchestrating productive discourses	Teachers provide multiple discourse formats to engage students in productive spoken and written forms of interaction that involve both established norms and routines and integrate students' personal and cultural practices.
Assessing and responding to student learning during instruction	Teachers use a range of assessment practices during instruction including eliciting and interpreting student thinking, implementing methods and tools to check student understanding, monitoring student thinking within and across lessons, and providing feedback to students.

Note. See Sykes and Wilson (2015) for additional detail and backing for each of the selected high-leverage practices.

Recommended Assessment Methods

In the second stage of the analysis, the review team evaluated the viability of assessing the eight selected HLPs. The team started by identifying methods commonly used to assess various HLPs. While this list was not intended to be comprehensive of all approaches to assessment of HLPs, commonly used approaches were included to help illustrate a range of possibilities. Each of the top eight HLPs were then independently reviewed and assigned a recommended, reasonable, or not recommended rating for each of the assessment methods. Judgements were guided by considering the suitability of each assessment method for providing valid evidence of the relevant HLP and the practical feasibility of managing development, administration, and scoring costs. Disagreements were discussed and reconciled by the whole team. Each of the recommended assessment approaches, or methods, are briefly described below in Table 4 with an analysis of recommendations for assessing each of the HLPs provided in Table 4.

Table 4. Assessment Methods

Assessment Methods	Description
Traditional knowledge tasks	Traditional knowledge tasks are characterized by selected response and constructed response formats. Typically, these tasks have a best or better answer that reflects understanding of a content concept or practice.
Scenario-based knowledge tasks	Scenario based knowledge requires teachers to apply knowledge of content in the context of a teaching practice (e.g., selecting materials, analyzing student confusion, selecting a content representation). Scenario-based knowledge tasks typically require a selected or constructed response and have a best or better answer that reflects an understanding of the content. A rubric can be applied to score responses using either human raters or automated scoring models.
Situational judgment tasks	Situational judgement tasks focus on situations encountered in a work context and often focus on interpersonal skills, problem solving, cultural awareness, or other job specific tasks. Situational judgement tasks typically require a selected or constructed response that is evaluated based on a best option determined by a panel of experts.
Analysis of standardized artifacts	A common or standardized artifact (e.g., lesson plan, student work sample, instructional task/material from a textbook) is provided and the response is typically an analysis or reflection of the artifact. Responses are typically human scored based on a standardized rubric, but in some cases may employ AI to score or provide feedback.
Analysis of reflection of user selected artifacts	Teachers are typically asked to submit an instructional artifact from their own teaching (e.g., lesson plan, student work sample, instructional task/material from textbook). Artifacts may be evaluated based on specified criteria or teachers may be asked to analyze the artifact providing justifications or an analysis of strengths/weaknesses. Artifacts and/or responses are typically human scored based on a standardized rubric, but in some cases may employ AI to score or provide feedback.
Short standardized performance tasks	Teachers carry out a specified teaching task and are then evaluated on the quality of their performance. Typically, the teaching performance is short, does not involve any real time interactions with students, and is focused on a narrowly defined competence.

	Performances are typically human scored based on a standardized rubric, but in some cases may employ AI to score or provide feedback.
Extended standardized performance tasks	Teachers engage in an extended task and are evaluated on the quality of their performance. Typically, the teaching performance is extended, involves multiple real time simulated interactions, and can include a substantial range of competencies. Performances are typically human scored based on a standardized rubric, but in some cases may employ AI to score or provide feedback.
Teaching observation	Teachers are either directly observed teaching or provide a video of their teaching. Depending on the focus of the observation, teachers may be given more or less guidance on the kind of performance to be targeted. The teaching performance is typically human scored based on a standardized rubric, but in some cases may employ AI to score or provide feedback.

Table 5. Recommended Assessment Methods for High-Leverage Practices (HLPs) for Teaching

HLP	Example Assessment Methods							
	Traditional knowledge tasks	Scenario-based knowledge tasks	Situational judgment tasks	Analysis of standardized artifacts	Analysis of user selected artifacts	Short performance tasks	Extended performance tasks	Teaching observation
Drawing on students' cultural, family, intellectual, and personal experiences and resources		✓✓	✓✓		✓✓			
Mastering lesson content for instructional purposes	✓✓	✓✓			✓			
Selecting/designing instructional tasks, activity structures, and formats		✓✓	✓✓		✓✓			
Building positive classroom climate			✓✓	✓✓			✓✓	✓✓
Enacting instructional tasks and activities					✓	✓✓	✓✓	✓✓
Engaging students with subject matter		✓		✓	✓	✓✓	✓✓	✓✓
Orchestrating productive discourses				✓			✓✓	✓✓
Assessing and responding to student learning during instruction		✓		✓	✓	✓✓	✓✓	✓✓

Note. ✓ = Reasonable assessment format that may not be the best for the HLP. ✓✓ = Recommended assessment format for the HLP

Discussion

The purpose of this report is to present recommendations for a small set of HLPs that represent a reasonable starting point for developing the next generation of Praxis teaching assessments. We built on the work of Sykes and Wilson (2015) and, through a process of independent and collaborative judgments, identified eight HLPs to serve as the basis for developing HLP assessments. The eight selected HLPs all fall into the larger domain of instruction and cluster under three of the five instruction components: preparing and planning for high-quality instruction; attending to relational aspects of instruction; and interactive teaching. One implication is that practice-focused assessments that focus on this set of HLPs will prioritize these three components of instruction and will provide no direct evidence of the other six components of instruction. Furthermore, this selection of HLPs will not provide evidence of the components that fall under professional roles and responsibilities.

Recommendations for the suitability of each assessment method were guided by considering both the extent to which each assessment method provided valid evidence of the relevant teaching practice and the practical feasibility of managing development, administration, and scoring costs. The HLPs that primarily involve reasoning and knowledge tend to cluster under more traditional selected and constructed response assessment task formats and those that mostly involve teacher actions or behaviors tend to involve some form of performance assessment. We recognize that these recommendations are likely to change as assessment methods evolve and considerations related to both validity and cost need to be reevaluated. For example, as AI technologies continue to expand, assessment strategies that may have previously been prohibitively expensive due to the need for human development, administration, and scoring may be feasible in the near future.

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Suggested citation: Phelps, G., Howell, H., Mikeska, J., & Wylie, E. C. (in press). *Identifying high-leverage practices for guiding the development of teaching assessments*. ETS Research Report Series. <https://doi.org/10.64634/j4s8fh55>

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