

# What Teachers Should Know and Be Able to Do

National Board for Professional Teaching Standards®

## Introduction

In 1983, public concern about the state of American education was sharply heightened by the issuance of a federal report titled *A Nation at Risk*. The report provoked a wave of reform initiatives that engulfed the education community. Most of these programs, however, left out a critical element of the education equation: the classroom teacher.

If America is to have world-class schools, it must have a world-class teaching force. Many excellent teachers already work in the schools, but their work often goes unrecognized and unrewarded. As a consequence, many first-rate practitioners leave the schools, and others who could be exceptional teachers never consider teaching. Worse still, the knowledge and skills of the fine teachers who remain are often underutilized, their positive influence allowed only modest scope.

Three years after *A Nation at Risk*, in 1986, the Carnegie Task Force on Teaching as a Profession issued a pivotal report, *A Nation Prepared: Teachers for the 21st Century*. Its leading recommendation called for the establishment of a National Board for Professional Teaching Standards. The following year, this unique institution in the history of American education was born.

The *National Board's mission* is to advance the quality of teaching and learning by:

- ▶ maintaining high and rigorous standards for what accomplished teachers should know and be able to do,
- ▶ providing a national voluntary system certifying teachers who meet these standards, and
- ▶ advocating related education reforms to integrate National Board Certification in American education and to capitalize on the expertise of National Board Certified Teachers.

National Board Certification®, developed by teachers, with teachers, and for teachers, is a symbol of professional teaching excellence. Offered on a voluntary basis, it complements, not replaces, state licensing. While state licensing systems set entry-level standards for beginning teachers, National Board Certification has established advanced standards for experienced teachers.

Linked to these standards is a new generation of fair and trustworthy assessment processes that honor the complexities and demands of teaching. They focus on teacher work and the difficult issues that accomplished teachers confront on a regular basis. The NBPTS assessments for National Board Certification include having teachers construct a portfolio that represents an analysis of their classroom work and participate in exercises designed to tap the knowledge, skills, disposition and professional judgment that distinguish their practice.

At the time the National Board was founded in 1987, it was understood that a critical first task was the development of a policy that would spell out the National Board's vision of accomplished practice. In 1989, it issued its policy statement, *What Teachers Should Know And Be Able To Do*, which has served as a basis for all of the standards development work NBPTS has conducted. To this day, it remains the cornerstone of the system of National Board Certification and has served as a guide to school districts, states, colleges, universities and others with a strong interest in strengthening the initial and ongoing education of America's teachers. It also holds the promise of being a stimulus to self-reflection on the part of teachers at all levels of accomplishment as well as a catalyst for healthy debate and the forging of a new professional consensus on accomplished practice in each field of teaching.

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In this policy, the National Board presents its view of what teachers should know and be able to do—its convictions about what it values and believes should be honored in teaching. This expression of ideals guides all of the National Board's standards and assessment processes.

The fundamental requirements for proficient teaching are relatively clear: a broad grounding in the liberal arts and sciences; knowledge of the subjects to be taught, of the skills to be developed, and of the curricular arrangements and materials that organize and embody that content; knowledge of general and subject-specific methods for teaching and for evaluating student learning; knowledge of students and human development; skills in effectively teaching students from racially, ethnically, and socioeconomically diverse backgrounds; and the skills, capacities and dispositions to employ such knowledge wisely in the interest of students.

This enumeration suggests the broad base for expertise in teaching but conceals the complexities, uncertainties and dilemmas of the work. The formal knowledge teachers rely on accumulates steadily, yet provides insufficient guidance in many situations. Teaching ultimately requires judgment, improvisation, and conversation about means and ends. Human qualities, expert knowledge and skill, and professional commitment together compose excellence in this craft.

The National Board has led the vanguard effort to develop professional standards for elementary and secondary school teaching. The National Board Certified Teachers® stand for professionalism in the schools. The National Board's responsibility is not only to ensure that teachers who become National Board Certified meet its professional standards of commitment and competence, but also to maintain standards and assessments that are so well regarded that America's accomplished teachers will decide to seek National Board Certification.

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## Policy Position (Five Core Propositions)

The National Board for Professional Teaching Standards seeks to identify and recognize teachers who effectively enhance student learning and demonstrate the high level of knowledge, skills, abilities and commitments reflected in the following five core propositions.

### 1. Teachers are committed to students and their learning.

Accomplished teachers are dedicated to making knowledge accessible to all students. They act on the belief that all students can learn. They treat students equitably, recognizing the individual differences that distinguish one student from another and taking account of these differences in their practice. They adjust their practice based on observation and knowledge of their students' interests, abilities, skills, knowledge, family circumstances and peer relationships.

Accomplished teachers understand how students develop and learn. They incorporate the prevailing theories of cognition and intelligence in their practice. They are aware of the influence of context and culture on behavior. They develop students' cognitive capacity and their respect for learning. Equally important, they foster students' self-esteem, motivation, character, civic responsibility and their respect for individual, cultural, religious and racial differences.

### 2. Teachers know the subjects they teach and how to teach those subjects to students.

Accomplished teachers have a rich understanding of the subject(s) they teach and appreciate how knowledge in their subject is created, organized, linked to other disciplines and applied to real-world settings. While faithfully representing the collective wisdom of our culture and upholding the value of disciplinary knowledge, they also develop the critical and analytical capacities of their students.

Accomplished teachers command specialized knowledge of how to convey and reveal subject matter to students. They are aware of the preconceptions and background knowledge that students typically bring to each subject and of strategies and instructional materials that can be of assistance. They understand where difficulties are likely to arise and modify their practice accordingly. Their instructional repertoire allows them to create multiple paths to the subjects they teach, and they are adept at teaching students how to pose and solve their own problems.

### 3. Teachers are responsible for managing and monitoring student learning.

Accomplished teachers create, enrich, maintain and alter instructional settings to capture and sustain the interest of their students and to make the most effective use of time. They also are adept at engaging students and adults to assist their teaching and at enlisting their colleagues' knowledge and expertise to complement their own. Accomplished teachers command a range of generic instructional techniques, know when each is appropriate and can implement them as needed. They are as aware of ineffectual or damaging practice as they are devoted to elegant practice.

They know how to engage groups of students to ensure a disciplined learning environment, and how to organize instruction to allow the schools' goals for students to be met. They are adept at setting norms for social interaction among students and between students and teachers. They understand how to motivate students to learn and how to maintain their interest even in the face of temporary failure.

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Accomplished teachers can assess the progress of individual students as well as that of the class as a whole. They employ multiple methods for measuring student growth and understanding and can clearly explain student performance to parents.

#### 4. Teachers think systematically about their practice and learn from experience.

Accomplished teachers are models of educated persons, exemplifying the virtues they seek to inspire in students -- curiosity, tolerance, honesty, fairness, respect for diversity and appreciation of cultural differences -- and the capacities that are prerequisites for intellectual growth: the ability to reason and take multiple perspectives to be creative and take risks, and to adopt an experimental and problem-solving orientation.

Accomplished teachers draw on their knowledge of human development, subject matter and instruction, and their understanding of their students to make principled judgments about sound practice. Their decisions are not only grounded in the literature, but also in their experience. They engage in lifelong learning which they seek to encourage in their students.

Striving to strengthen their teaching, accomplished teachers critically examine their practice, seek to expand their repertoire, deepen their knowledge, sharpen their judgment and adapt their teaching to new findings, ideas and theories.

#### 5. Teachers are members of learning communities.

Accomplished teachers contribute to the effectiveness of the school by working collaboratively with other professionals on instructional policy, curriculum development and staff development. They can evaluate school progress and the allocation of school resources in light of their understanding of state and local educational objectives. They are knowledgeable about specialized school and community resources that can be engaged for their students' benefit, and are skilled at employing such resources as needed.

Accomplished teachers find ways to work collaboratively and creatively with parents, engaging them productively in the work of the school.

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## Supporting Statement

We each remember the great teachers who touched our lives, kindled our interest and pressed us to do our best. We hold powerful images of such teachers. They exhibited a deep caring and love for children. They conveyed a passion for the subjects they taught, captivating their students with that passion. They approached their work with creativity and imagination, striving constantly to improve. As committed professionals, they were proud to be teachers.

The images of teaching that we share are deceptive as well as compelling. They emphasize teaching's external aspects, not its inner workings. If we fondly recall the great teachers of our past, we also typically see teaching as a humble undertaking. It concerns itself with the least powerful age group in society. It involves such seemingly routine activities as arranging seat-work, lecturing, reviewing and responding to students' efforts, and disciplining their behavior.

Historically, there is an enduring constancy in the organization of schools, of classrooms and of teaching itself. Self-contained classrooms, whole-group, textbook-centered instruction, teaching as telling, learning as the passive acquisition of facts, standardized testing -- these patterns of schooling are as familiar as chalk dust. They constitute an unintended national curriculum that, as an unrelieved diet, does not adequately serve the educational needs of a diverse and dynamic society. Good teachers, of course, depart in many ways from these routines.

These pervasive images underestimate teaching's complexities and freeze the enterprise into forms that overlook its non-routine nature and the importance of independent professional judgment in the life of the accomplished teacher. But teaching is work of the most demanding sort, for teachers must make dozens of decisions daily, command a wide body of knowledge and skill, learn to react instantly, and be disposed to act wisely in difficult situations. And while there are principles and precepts, skills and techniques, to guide the work, teaching is also an activity with artistic aspects, a craft calling for reflection and judgment.

Although complicated, teaching nonetheless evokes simple, reductionist analysis. Much of the discourse on teaching and learning pulls apart what must be joined in practice. Chroniclers of teaching, for example, often assign the teacher's primary loyalty to the student or to the subject, with elementary teachers often characterized as "student-centered" and secondary teachers seen as "subject-centered." This dichotomy is false. Sound teaching merges commitment to students with allegiance to knowledge at all grade levels. All teachers must uphold the claims of knowledge, yet strive to build spacious avenues from such knowledge to students' understanding.

There is likewise a tendency to frame teaching either in terms of imparting valuable knowledge or as encouraging the acquisition of skills. But knowledge and skill are not disjoint. Knowledge -- in the form of specific facts and organizing principles -- is necessary to the exercise of most skills, just as a range of skills is necessary to the acquisition and construction of knowledge. Knowledge and skill cannot be pulled apart, nor can one assume pride of place over the other.

Another commonplace fallacy is to distinguish "basic" from "higher-order" skills, and to regard mastery of the basics as a precondition to advanced forms of reasoning and functioning. Accomplished teachers realize that higher-order thinking is the hallmark of successful learning at all levels. Students, for example, cannot become good writers without engaging in complex problem-solving processes, nor can they effectively learn basic mathematics simply by memorizing rules for manipulating numbers. There can be no neat division of teaching labor along a basic-to-

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advanced skills continuum. All teachers must concern themselves with higher-order skills, with the executive functions of reasoning, and with students' capacities to monitor their own learning.

To unify these dichotomies in practice however, requires skill, wisdom and judgment. Accomplished teachers constantly assess and adjust their practice to maintain fidelity to students and to subjects, to knowledge and to skills, and to basic and advanced functions. Professionalism in teaching entails the ongoing pursuit of these unities. Hence, teachers regularly find themselves confronting hard choices -- sometimes sacrificing one goal for another, sometimes making compromises.

While teaching demands crisp reasoning and few settings yield to only a single approach, teachers do not have free rein to select any approach that strikes them as felicitous. Rather, their choices are anchored in their own experience and in the settled ground of the knowledge base that defines both efficacious and flawed practice. Being able to apply steady, disciplined judgment and reflective scrutiny within the bounds set by this constantly expanding body of knowledge is the hallmark of professionalism in teaching. As such, these values will be found at the heart of the standards the National Board will promulgate.

### *On the Commitment to Professionalism in Teaching*

As its title indicates, the National Board is committed to professional standards for teaching. The term "professional" is an honorific in our society, and denotes occupations characterized by certain attributes. Chief among these are a body of specialized, expert knowledge together with a code of ethics emphasizing service to clients. The knowledge base typically provides substantial, but not complete, guidance for professional practice. Professionals possess expert knowledge, but often confront unique, problematic situations that do not lend themselves to formulaic solutions. Professionals must cultivate the ability to cope with the unexpected and act wisely in the face of uncertainty.

Professionals deal with urgent human problems: matters of life and death, justice, hope and opportunity. Essential to their work is the trust of clients. What warrants such trust is the obligation, upheld within the community of professionals, to pursue an ethic of service and to employ special knowledge and expertise in the interests of their clients.

These general observations apply to teaching, but with important distinctions. While teachers employ their knowledge and skill on students, they also strive to empower students to continue the quest for understanding, so that one day the pupil may surpass the instructor. In this regard, teaching is the most democratic of professions. It aims to place within the hands, head and hearts of students the means for them to teach themselves.

The ethical dimensions of teaching also distinguish it from other professions. Unique demands arise because the client's attendance is compulsory and, more importantly, because the clients are children. Thus, elementary, middle and high school teachers are obligated to meet a stringent ethical standard. Other ethical demands derive from the teacher's role as a model of an educated person. Teaching is a public activity; a teacher works daily in the gaze of his or her students, and the extended nature of their lives together in schools places special obligations on the teacher's behavior. Students learn early to read and draw lessons from their teachers' characters. Teachers, consequently, must conduct themselves in a manner students might emulate. Their failure to practice what they preach does not long elude students, parents or peers. Practicing



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with this additional dimension in mind calls for a special alertness to the consequences of manner and behavior. Standards for professional teaching ought, therefore, to emphasize its ethical nature.

### *What the National Board Will Value in Teaching*

The rich amalgam of knowledge, skills, dispositions and beliefs that will characterize National Board Certified teachers are clustered under the five core propositions presented above. What follows is an elaboration of these principles that go to the heart of the National Board's perspective on accomplished teaching.

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## *Proposition #1: Teachers are Committed to Students and Their Learning*

Fundamental to the teacher's credo is the belief that all students can learn. Furthermore, they act on that belief. Accomplished teachers like young people and are dedicated to and skilled at making knowledge accessible to all students, even as they acknowledge their distinctive traits and talents. Success depends on teachers' belief in the dignity and worth of all human beings and in the potential that exists within each child. Teachers typically do not work one-on-one with students for extended periods of time because they are responsible for groups. But within this constraint, they are attentive to human variability and its influence on learning.

### *Teachers Recognize Individual Differences in Their Students and Adjust Their Practice Accordingly*

To respond effectively to individual differences, teachers must know many things about the particular students they teach: Alex has a stutter, Maria loves science fiction, Toby is anxious about mathematics, Marcus is captivated by jazz. But accomplished teachers know much more -- whom their students go home to at night, how they have previously performed on standardized tests, what sparks their interest. This kind of specific understanding is not trivial, for teachers use it constantly to decide how best to tailor instruction.

As diagnosticians of students' interests, abilities and prior knowledge, skillful teachers learn to "read" their students. When planning a unit on aging, for example, they will anticipate what concepts and activities certain students may find problematic. Watching a student work on a computer, they will look for signs of progress. By keeping a finger on the pulse of the class, teachers decide when to alter plans, work with individual students, or enrich instruction with additional examples, explanations or activities.

Proficient teachers learn from their experiences. They learn from listening to their students, from watching them interact with peers, and from reading what they write. The information they acquire about students in the course of instruction subsequently becomes part of their general knowledge of education. Such monitoring and learning is no easy feat. What teachers are able to see, hear and learn is colored by their own prior knowledge and experience. Thus teachers must, in their efforts to work with children different than themselves, monitor both what they see and hear, and what is not so close to the surface. They must strive to acquire a deep understanding of their students and the communities from which they come that shape students' outlooks, values and orientations toward schooling.

### *Teachers Have an Understanding of How Students Develop and Learn*

In addition to particular knowledge of their students, teachers use their understanding of individual and social learning theory, and of child and adolescent development theory, to form their decisions about how to teach. They are familiar with the concepts generated by social and cognitive scientists that apply to teaching and learning. Moreover, they integrate such knowledge with their personal theories of learning and development generated from their own practice. For example, accomplished teachers know that old theories of a monolithic intelligence have given way to more complex theories of multiple intelligences. Current thinking no longer casts "intelligence" as a context-free, one-dimensional trait. Instead, it recognizes different kinds of intelligence -- linguistic, musical, mathematical, spatial, kinesthetic, personal. This perspective also holds that there are variations in the sources of intelligence (e.g., practical experience versus formal study) and the forms of intelligence (e.g., procedural skills versus propositional knowledge).



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Both their knowledge of these theories and their experiences in classrooms have taught teachers that each student has different strengths, perhaps even gifts. Teachers think about how to capitalize on these assets as they consider how best to nurture additional abilities and aptitudes.

Moreover, teachers recognize that behavior always takes place within a particular setting that, to some extent, defines the behavior. They know, for instance, that students who cannot flawlessly recite multiplication tables may still be able to multiply in other contexts (e.g., in calculating whether they have enough money for items at the grocery store). Accomplished teachers are aware that school settings sometimes obscure a clear vision of students' aptitudes and intelligences. Therefore, they strive to provide multiple contexts in which to promote and evaluate those abilities.

They also recognize the ways in which intelligence is culturally defined. That is, what is considered intelligent behavior is largely determined by the values and beliefs of the culture in which that behavior is being judged. Accomplished teachers recognize that in a multicultural nation students bring to the schools a plethora of abilities and aptitudes that are valued differently by the community, the school and the family. The knowledge, skills, abilities and dispositions that are nurtured in a Native American community in the state of Washington will differ from those valued in an Hispanic community in Florida. Likewise, those cultivated by a suburban community in Utah will differ from those developed in urban New York. Thus, teachers are attuned to the diversity that is found among students and develop an array of strategies for working with it. This includes providing educational experiences which capitalize on and enlarge the repertoires of learning and thinking that students bring to school.

### *Teachers Treat Students Equitably*

As stewards for the interests of students, accomplished teachers are vigilant in ensuring that all pupils receive their fair share of attention, and that biases based on real or perceived ability differences, handicaps or disabilities, social or cultural background, language, race, religion, or gender do not distort relationships between themselves and their students. This, however, is not a simple proposition. Accomplished teachers do not treat all students alike, for similar treatment is not necessarily equivalent to equitable education. In responding to differences among students, teachers are careful to counter potential inequities and avoid favoritism. This requires a well-tuned alertness to such matters and is difficult, as we have only modest knowledge of human differences and how best to respond to them. Hence, accomplished teachers employ what is known about ineffectual and effective practice with diverse groups of students, while striving to learn more about how best to accommodate those differences.

### *Teachers' Mission Extends Beyond Developing the Cognitive Capacity of Their Students*

Teachers are concerned with their students' self-concept, with their motivation, with the effects of learning on peer relationships, and with the development of character, aspiration and civic virtues. These aspects of the student -- important as they are in their own right -- are also essential to intellectual development. Proficient teachers consider students' potential in this broader sense when making decisions about what and how to teach.

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### Proposition #2: Teachers Know the Subjects They Teach and How to Teach Those Subjects to Students

If one cardinal precept of teaching is a commitment to the welfare and education of young people, the other is a commitment to subject matter. Accomplished teachers are dedicated to exposing students to the social, cultural, ethical and physical worlds in which they live, and they use the subjects they teach as entrees into those worlds. Thus, elementary teachers know about geography and its relationship to commerce and history. Foreign language teachers know how language and culture interact and fuse. But, it is not sufficient that teachers know the facts that fall into these different content domains. Understanding subject matter entails more than being able to recite lists of dates, multiplication tables, or rules of grammar.

### Teachers Appreciate How Knowledge in Their Subjects is Created, Organized and Linked to Other Disciplines

Teachers in command of their subject understand its substance -- factual information as well as its central organizing concepts -- and the ways in which new knowledge is created, including the forms of creative investigation that characterize the work of scholars and artists.

Physics teachers know about the roles played by hypothesis generation and experimentation in physics; mathematics teachers know the modes of justification for substantiating mathematical claims; art teachers understand how visual ideas are generated and communicated; history teachers know how historians use evidence to interpret past events; and English teachers understand the relationships among reading, writing and oral language. Many special education teachers have a slightly different orientation -- focusing on skill development as they work to help moderately and profoundly handicapped students achieve maximum independence in managing their lives.

Understanding the ways of knowing within a subject is crucial to the National Board Certified teacher's ability to teach students to think analytically. Critical thinking does not occur in the abstract, for the thinker is always reasoning about something. Proficient teachers appreciate the fundamental role played by disciplinary thinking in developing rich, conceptual subject-matter understandings. They are dedicated to exposing their students to different modes of critical thinking and to teaching students to think analytically about content.

Teachers represent the collective wisdom of our culture and insist on maintaining the integrity of the methods, substance and structures of disciplinary knowledge. In the face of pressures to portray knowledge in weak and diluted forms, they remain firm. Their role, however, is not just to reinforce the status quo. Rather, appreciative of the fact that there are multiple perspectives and interpretations in each discipline, accomplished teachers encourage students to question prevailing canons and assumptions to help them think for themselves.

It is sometimes assumed that elementary school teachers need not be equipped to approach their subjects critically. But all accomplished teachers, regardless of the ages of their students, are charged with teaching students about something, and in order to do so, they must appreciate its complexity and richness. Teachers must possess such knowledge if they are to help their students develop higher-order thinking skills -- the hallmark of accomplished teaching at any level. Being able to engage elementary school children in the broad array of subjects they can profitably come to appreciate makes elementary school practice especially challenging. This does not imply

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that fourth-grade teachers should have the same command of biology as high school biology teachers. However, it does mean that they have an understanding of science that allows them to present basic precepts to their students and introduce them to the joy of discovering -- and thinking about -- the natural world of which they are a part.

### *Teachers Command Specialized Knowledge of How to Convey a Subject to Students*

Knowledge of subject matter is not synonymous with knowledge of how to reveal content to students so they might build it into their systems of thinking. Accomplished teachers possess what is sometimes called "pedagogical content knowledge." Such understanding is the joint product of wisdom about teaching, learning, students and content. It includes knowledge of the most appropriate ways to present the subject matter to students through analogies, metaphors, experiments, demonstrations and illustrations. Subject-specific knowledge also includes an awareness of the most common misconceptions held by students, the aspects that they will find most difficult, and the kinds of prior knowledge, experience and skills that students of different ages typically bring to the learning of particular topics. Proficient science teachers, for example, know that some students have misconceptions about gravity that can influence their learning, while proficient art and music teachers know that young children arrive at school at various stages of maturity with respect to eye-hand coordination. Teachers use this knowledge of their students to structure instruction that facilitates further development.

Thus, subject-specific pedagogical knowledge is not a bag of tricks, but a repertoire of representations that combines instructional techniques with subject matter in ways that take into account the mix of students and school contexts that confront the teacher. Such subject-specific teaching knowledge embodies a way of reasoning through and solving the problems that arise in the daily work of teachers -- decisions ranging from what aspects of the subject matter to emphasize to decisions about how to pace instruction. In making these choices, teachers bring to bear their knowledge of students and learning and teaching and subject matter.

Professional teachers' instructional repertoires also include knowledge of available curricular resources such as primary sources, models, reproductions, textbook series, teachers' guides, videotapes, computer software and musical recordings. Their commitment to learning about new materials includes keeping abreast of technological developments that have implications for teaching; for example, how to engage students in the rapidly expanding field of computer technology, as well as how to use the computer to enhance their own teaching. Thus, able teachers keep current with the growing body of curricular materials -- including literature available through their professional organizations -- and constantly evaluate the usefulness of those materials based on their understanding of curriculum theory, of students, of subject matter, and of the school's and their own educational aims.

### *Teachers Generate Multiple Paths to Knowledge*

Knowledgeable teachers are aware there is value in both structured and inductive learning. That is, while it is useful to teach students about the concepts and principles that scholars have generated in the various disciplines, it is also valuable to engage students in learning by discovery, where they themselves search for problems, patterns and solutions. Proficient teachers help students learn to pose problems and work through alternative solutions, in addition to teaching them about the answers that others have found to similar problems.

The posing and solving of problems on their own is central to the development of true understanding by students -- moving far beyond the rote memorization of facts, the easy manipulation



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of formulas or the facile playing of a musical scale. Teaching for understanding requires students to integrate aspects of knowledge into their habits of thinking, rather than simply store fragmented knowledge bits. It also means learning to think in a nonlinear way, approaching issues from different angles, weighing multiple criteria and considering multiple solutions. Thus, in the eyes of the proficient teacher, "knowledge" is not conceived narrowly as a lower-level form of understanding. Rather, knowledge is cast in the richest light -- as a combination of skills, dispositions, propositions and beliefs -- integrated and flexible, elaborate and deep. Furthermore, understanding involves the ability to apply such knowledge to problems never before encountered by teacher or student. Accomplished teachers appreciate that this is the kind of knowledge and understanding that counts, and that this type of learning cannot be rushed.

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## *Proposition #3: Teachers are Responsible for Managing and Monitoring Student Learning*

Professional teachers hold high expectations for all students and see themselves as facilitators of student learning. To fulfill these responsibilities, teachers must create, enrich and alter the organizational structures in which they work with young people. They also find ways to capture and sustain the interest of their students. Because time is a precious commodity in schools, teachers attempt to make the most efficient use of it. To accomplish these tasks, teachers seek to master the body of generic pedagogical knowledge.

### *Teachers Call on Multiple Methods to Meet Their Goals*

Accomplished teachers know and can employ a variety of generic instructional skills -- how to conduct Socratic dialogues, how to lecture, how to oversee small cooperative learning groups. Although much of instruction is determined by the content to be taught, there are some commonalities about teaching methods that guide their practice. They are aware of what can reasonably be covered in a 45-minute roundtable discussion, when to hold back and let students figure out their own solutions, and what types of questions provoke the most thoughtful conversation. But it is not sufficient that teachers know about different modes of instruction; they must also know how to implement those strategies. Traditional distinctions between knowing and doing have obscured the fact that thought and action interpenetrate in teaching -- knowing about something and knowing how to do something are both forms of understanding central to teaching.

Because students vary in learning styles and because different settings afford differing learning opportunities, accomplished teachers know when and how to alter the social and physical organizational structure of the learning environment. It is not enough to be a master lecturer, for there are many times when lecturing is not an effective way to teach. An outdoor experiment, a mock trial or an economic simulation, for example, may be more appropriate. Alternatively, a playlet or a debate might be a more effective way to engage students in thinking and learning. Teachers know about the breadth of options available to them, such as innovative instructional formats that involve discovery learning, conceptual mapping, brainstorming, working with computers, as well as more traditional tried-and-true methods.

Teachers not only have the opportunity to vary instructional settings and to employ a range of instructional materials, they also have the opportunity to call on various human resources to custom-tailor the working environment for students. Accomplished teachers know how to mobilize students to tutor their peers and how to engage aides and volunteers as teaching assistants. In schools where staffing arrangements are not fixed and inflexible, teachers also have a good appreciation of their colleagues' skills and the circumstances in which their colleagues' talents can best complement their own. Professional teachers wisely enlist the knowledge and expertise of their fellow faculty members in a variety of ways as they seek to provide their students with as rewarding a learning experience as possible.

Accomplished teachers also know the strengths and weaknesses of these options, and their suitability or incompatibility for certain students and groups. The settings that a teacher chooses are not just matters of personal preference, but are grounded in the literature of teaching. Teaching, to the accomplished teacher, is an elegant web of alternative activities in which students are engaged with the content; sometimes with the teacher, sometimes with each other, sometimes alone.

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### *Teachers Orchestrate Learning in Group Settings*

Teachers know how to manage groups of students. They are responsible for setting forth the social norms by which students and teachers act and interact, helping students learn to adopt appropriate roles and responsibilities for their own learning and that of their peers. This includes teaching students to work independently without constant direct supervision by a teacher.

Accomplished teachers have developed systems for overseeing their classrooms so that students and teacher alike can focus on learning, not on controlling disruptive behavior. Discipline and management techniques vary, and no one system has been proven most effective. Hence, proficient teachers consider the desired learning results, their knowledge of their students and the social context, and their own prior experience in selecting management strategies.

Teachers also know that different instructional formats often require different norms of social interaction. Accomplished teachers can alternate among organizational arrangements and understand how different structures cast students and teachers in different roles. Applying their knowledge of the relative strengths and weaknesses of different structures, they weigh these considerations when deciding which instructional strategy and organizational structure will best enhance student learning. They also continually search for new forms of organization that may expand their repertoire and prove effective.

### *Teachers Place a Premium on Student Engagement*

Facilitating student learning is not simply a matter of placing young people in educative environments, for teachers must also motivate them, capturing their minds and hearts and engaging them actively in learning. Thus, the National Board Certified teacher understands the ways in which students can be motivated and has strategies to monitor student engagement. The teacher's role in building upon student interests and in sparking new passions is central to building bridges between what students know and can do and what they are capable of learning.

Proficient teachers also know that motivating students is not always equivalent to making learning fun, for learning can be difficult work. Developing an acute sense of one's body in dance, for example, requires intense intellectual and physical concentration. Writing a short story requires drafting and re-drafting, editing and re-editing, occasionally submitting oneself to the critiques of peers and teachers. To practice effectively, teachers need to know how to encourage students even in the face of temporary failure and the inevitable doubts that students meet as they push themselves to new affective, intellectual and physical planes. With such learning comes the real joy in education, the satisfaction of accomplishment.

### *Teachers Regularly Assess Student Progress*

While teachers are not always the central actors in their students' educational experiences, they are ultimately responsible for the creation and maintenance of those experiences and bear a considerable responsibility for what students learn at school. Proficient teachers, therefore, can judge the relative success of the activities they design. They can track what students are learning (or not learning), as well as what they, as teachers, are learning.

Assessment in teaching is not a simple task; teachers must monitor the successes and failures of individual students and evaluate their classes as collectives of learners. Additionally, they make judgments about themselves as teachers in relation to those students and classes. Although these judgments are interdependent of one another, they are not necessarily synonymous. One of the essential tensions of teaching is that teachers teach individual students, while managing groups.

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Accomplished teachers do not treat a class as a monolith. They know that a class does not learn; individual students do. But individuals neither learn the same things, nor learn at the same pace.

Accomplished teachers use information about how the students in their classes are doing "on average" as a guide to making judgments about the relative success or failure of an instructional strategy. But they do not forget that there are few average students. They know that some students have moved far beyond that "average" evaluation, while others trail. And while they have to make decisions about what to do with the class as a whole, proficient teachers find ways to accommodate what they know about individual students and what they are learning in their plans for the whole group.

Accomplished teachers understand that the purposes, timing and focus of an evaluation affect its form. They are astute observers of students -- their movements, their words and their minds. Teachers track student progress with a variety of evaluation methods, each with its own set of purposes, strengths and weaknesses. Their knowledge extends to creating their own, sometimes innovative, tools for evaluation, including portfolios, videotapes, demonstrations and exhibitions. In addition, they may use more traditional measures such as quizzes or exams. Sometimes teachers ask questions in the middle of a group discussion in order to assess how well students are following the presentation of information; or they may talk individually with students while they are engaged in independent work. At other times they watch their students' behavior as they read to each other or work in the laboratory.

Teachers frequently do not assign grades, for evaluation is not always for the purpose of recording grades; rather, it allows students and teachers to assess where they stand. Teachers also assess students to determine how much they have learned from a unit of instruction, be it a week on seeds, a semester of photography, or a year of athletic training. Student responses then contribute to teachers' decisions about whether to reteach, review or move on. By continually adding to their repertoire of methods for assessing what students have learned, as well as constantly monitoring student progress, accomplished teachers are able to provide constructive feedback to students, parents and themselves. Finally, such teachers help their students to engage in self-assessment, instilling in them a sense of responsibility for monitoring their own learning.

### *Teachers Are Mindful of Their Principal Objectives*

Teachers also know about planning instruction -- identifying and elaborating educational objectives, developing activities to help them meet their goals and drawing upon resources that will serve their purposes. Experienced teachers do not all plan alike. Some do not write elaborate plans prior to teaching, having automated their planning through years of experience in classrooms. Other teachers plan in detail (e.g., creating individual educational plans for special education students). No matter what form their final plans take -- scribbles on a scrap of paper or lengthy and detailed outlines accomplished teachers can clearly articulate their goals for students.

# What Teachers Should Know and Be Able to Do

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## *Proposition #4: Teachers Think Systematically About Their Practice and Learn from Experience*

As with most professions, teaching requires an open-ended capacity that is not acquired once and for all. Because they work in a field marked by many unsolved puzzles and an expanding research base, teachers have a professional obligation to be lifelong students of their craft, seeking to expand their repertoire, deepen their knowledge and skill, and become wiser in rendering judgments. Accomplished teachers are inventive in their teaching and, recognizing the need to admit new findings and continue learning, stand ready to incorporate ideas and methods developed by others that fit their aims and their students. What exemplifies excellence, then, is a reverence for the craft, a recognition of its complexities, and a commitment to lifelong professional development.

### *Teachers Are Continually Making Difficult Choices That Test Their Judgment*

The demands of teaching often present stiff challenges that do not lend themselves to simple solutions. Conflicting objectives regularly require teachers to fashion compromises that will satisfy multiple parties. A Western Civilization teacher, for example, attempting to reconcile demands for coverage with demands for in-depth understanding, will do what is necessary to race from Plato to NATO, yet set aside time to develop in students the understanding that history is evolutionary rather than a series of events strung together chronologically. Likewise, a third-grade teacher will find a way to introduce students to the idea that writing is a thinking process, while ensuring that students are learning the basics of spelling and grammar.

Teachers also face choices that force them to sacrifice one goal for another. For instance, teachers who are committed to teaching mathematics for conceptual understanding want to teach students to see number relationships in the real world, to represent them with appropriate symbols, and to use their knowledge of mathematical formulas and computational skills to manipulate those numbers. Such teaching requires giving students time to frame their own problems, find their own solutions, and compare those solutions with alternatives posed by their classmates. Students who have learned through experience that math class involves filling out worksheets and doing problem sets may dislike the uncertainty inherent in problems with multiple or no solutions; they may be troubled that their teacher now wants them to discuss the reasons why a particular solution makes sense. Abandoning speed and accuracy as the criterion of success may temporarily jeopardize students' performance on standardized tests, even as the teacher fosters growth in the depth of students' mathematical competence. In deciding to teach in this way, a teacher risks alienating students, parents and administrators who have their own strong ideas of what math class is supposed to look like and the kind of competence it is supposed to yield.

Such circumstances call on teachers to employ their professional knowledge of what makes for sound practice, with the interest of their students given paramount consideration. While more than one satisfactory path may be derived to balance non-complementary objectives, the teacher's decision will be grounded in established theory and reasoned judgment.

### *Teachers Seek the Advice of Others and Draw on Education Research and Scholarship to Improve Their Practice*

Aware that experience is not always a good teacher, proficient teachers search out other opportunities that will serve to cultivate their own learning. As savvy students of their own teaching, they know the value of asking others to observe and offer a critique of their teaching. They also know the value of writing about their work and of soliciting reactions from parents and students.



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Thus, masterful teachers develop specialized ways to listen to their students, colleagues and administrators, and reflect on their teaching in order that they might improve their practice.

Able teachers are also students of education scholarship and are cognizant of the settled and unsettled territory in their field. They stay abreast of current research and, when appropriate, incorporate new findings into their practice. They take advantage of teacher centers and special conferences and workshops. They might conduct and publish their own research, if so inclined, for testing of new approaches and hypotheses is a commonplace habit among adept teachers, even if a normally overlooked and undocumented one.

Wise teachers understand the legitimacy and limitations of the diverse sources that inform teaching and they continuously draw upon them to enrich their teaching. Their enthusiasm for, and commitment to, continued professional development exemplifies a disposition they hope to nurture in students. Hence, the thinking, reasoning and learning that characterize first-rate teaching are doubly valuable: not only are thoughtful teachers able to teach more efficiently and effectively, they are also models for the critical, analytic thinking that they strive to develop in our youth. Teachers who are themselves exemplars of careful reasoning -- considering purposes, marshaling evidence and balancing outcomes -- are more likely to communicate to students the value and manner of such reasoning. Moreover, they model other dispositions and traits as well, such as a commitment to creativity in their work and the disposition to take risks in exploring new intellectual, emotional, physical or artistic territories.

Proficient teachers, then, are models of educated persons. Character and competence contribute equally to their educative manner. They exemplify the virtues they seek to impart to students: curiosity and a love of learning; tolerance and open-mindedness; fairness and justice; appreciation for our cultural and intellectual heritages; respect for human diversity and dignity; and such intellectual capacities as careful reasoning, the ability to take multiple perspectives, to question received wisdom, to be creative, to take risks, and to adopt an experimental and problem-solving orientation.

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## Proposition #5: Teachers are Members of Learning Communities

Teaching most commonly is regarded as the daily conduct of lessons and the provision of learning experiences. But the work of teaching reaches beyond the boundaries of individual classrooms to wider communities of learning. In order to take advantage of the broad range of professional knowledge and expertise that resides within the school, accomplished teachers have a range of duties and tasks outside the direct instruction of students that contribute importantly to the quality of the school and to student learning.

There are two broad areas of responsibility. One involves participation in collaborative efforts to improve the effectiveness of the school. The second entails engaging parents and others in the community in the education of young people.

### Teachers Contribute to School

#### Effectiveness by Collaborating with Other Professionals

Teaching is often portrayed as the implementation of policy and curriculum developed by others - as following orders. The National Board advocates a more proactive and creative role for teachers: engaging them in the analysis and construction of curriculum, in the coordination of instruction, in the professional development of staff and in many other school-site policy decisions fundamental to the creation of highly productive learning communities.

While state authorities and local school district leadership establish broad goals, objectives and priorities for the schools, professional teachers share responsibility with colleagues and administrators for decisions about what constitutes valuable learning for students. This includes their participation in critically analyzing the school curriculum, identifying new priorities and communicating necessary changes to the school community. Teachers' knowledge of curriculum and their students are essential to discharging these responsibilities effectively. But a readiness to work collaboratively on such matters and not blindly accept curricular conventions is also necessary.

Accomplished teachers attend to issues of continuity and equity of learning experiences for students that require school-wide collaboration across the boundaries of academic tracks, grade levels, special and regular instruction and disciplines. Such boundaries, constructed as much out of traditional patterns of school organization as out of instructional rationales, are often dysfunctional and damaging to student learning. National Board Certified teachers cultivate a critical spirit in appraising such schooling commonplaces, together with a willingness to work with administrators toward school-wide improvements that can include revision of organizational as well as instructional features of schooling.

The development of curriculum and the coordination of instruction are particularly important functions shared among teachers and administrators. Proficient teachers collaborate in planning the instructional program of the school to assure continuity of learning experiences for students. They possess the interpersonal skills needed to work on teams and a willingness to work together in the interest of the school community. Their understanding of the technical requirements of a well-coordinated curriculum enables them to participate in planning and decision-making within teams, departments or other educational units outside the classroom, laboratory or studio.

Consonant with their role in curriculum planning and coordination, teachers are aware of the learning goals and objectives established by state and local authorities. Professional practice requires that teachers be knowledgeable about their legal obligation to carry out public policy as

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represented by state statute and regulation, school board directives, court decisions and other policies.

Accomplished teachers also participate in the coordination of services to students. Today's schools include a wide variety of educational specialists, and with increasing specialization has come the need for coordination, lest pupils' educational experiences become fragmented. The increased practice of "mainstreaming" special-needs students to assure that they are being educated in the least restrictive environment has meant that general and special education teachers need to work with one another. Compensatory education programs typically involve teaching pupils outside regular school settings. The various forms of English as a second language, bilingual and English-immersion programs often require cooperation among teachers of non- and limited-English-speaking youth. National Board Certified teachers are adept at identifying students who might benefit from such special attention and at working in tandem with specialists.

In addition to working on the improvement of school-wide curricula and the coordination of instruction, teachers work together to strengthen their teaching. Sometimes they observe each other teach; at other times they engage in discussions about teaching; and occasionally they collaborate in trying out new instructional strategies. While the particulars of how teachers choose to improve their instruction will vary according to the structure of opportunity and a teacher's dispositions and interests, the principle underlying such engagement is the continuous pursuit of teaching excellence in the company of peers.

Strong schools emphasize a process of continuous improvement. They are organized to find and solve problems and to locate, invent and experiment with different methods of instruction and school organization. Teachers within such schools work not only on professional development, but also on school-wide improvements. This expectation is part of what constitutes a professional orientation to teaching and part of what distinguishes the professional teacher.

The conventional image of the accomplished teacher as solo performer working independently with students is narrow and outdated. Committed career teachers assume responsibility in cooperation with their administrators for the character of the school's instructional program. They are team players willing to share their knowledge and skill with others and participate in the ongoing development of strong school programs. This participation may take many forms, such as mentoring novices, serving on school and district policy councils, demonstrating new methodologies, engaging in various forms of scholarly inquiry and artistic activity, or forming study groups for teachers.

### *Teachers Work Collaboratively with Parents*

Teachers share with parents the education of the young. They communicate regularly with parents and guardians, listening to their concerns and respecting their perspective, enlisting their support in fostering learning and good habits, informing them of their child's accomplishments and successes, and educating them about school programs. Kindergarten teachers, for example, can help parents understand that reading stories to their children is more important to literacy development than completing worksheets on letters.

In the best of all worlds, teachers and parents are mutually reinforcing partners in the education of young people. But three circumstances complicate this partnership. First, the interests of parents and schools sometimes diverge, requiring teachers to make difficult judgments about how best to fulfill their joint obligations to their students and to parents. Second, students vary in the degree and kind of support they receive at home for their school work. The effects of

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culture, language, and parental education, income and aspirations influence each learner. Teachers are alert to these effects and tailor their practice accordingly to enhance student achievement. However, when faced with an unavoidable conflict, the teacher must hold the interest of the student and the purposes of schooling paramount. Third, the behavior and mind-set of schools and families can be adversarial. Some parents are distrustful of the school's values, and the schools sometimes underestimate the family's potential to contribute to their children's intellectual growth. Students get caught in the middle, their allegiance to and affection for each party challenged by the other. Accomplished teachers develop skills and understandings to avoid these traditional pitfalls and work to foster collaborative relationships between school and family.

The changing family structure in our society creates new challenges as well, for there are now more youth with single parents, working parents and parents with inadequate income. Thus, creating home-school partnerships has become more difficult for teachers and parents in many communities. In attempting to work creatively and energetically with families in the interest of students' development, able teachers acquire knowledge and understanding of individual students' lives outside school. A teacher's foremost responsibility is to the intellectual development of our youth, but they are mindful of the broad range of children's needs, including the need for guidance and the strong presence of caring and nurturing adults. This is a difficult set of obligations to fulfill. On the one hand, teachers are prepared neither by training nor by role to serve as parent surrogates or social workers. The distinctive mission of teaching is to promote learning, a complex undertaking in itself. On the other hand, education's broad and humane purposes do not admit any narrow specialization. Students' physical, emotional, and social well-being cannot be separated from their intellectual growth.

### *Teachers Take Advantage of Community Resources*

Professional teachers cultivate knowledge of their school's community as a powerful resource for learning. The opportunities are many for enriching projects, lessons, and study: observing the city council in action; collecting oral histories from senior citizens; studying the ecology of the local environment; visiting a nearby planetarium; drawing the local architecture; or exploring career options on-site. Any community -- urban or rural, wealthy or poor -- can be a laboratory for learning under the guidance of an effective teacher. Moreover, within all communities there are valuable resources such as other teachers and students, senior citizens, parents, business people, and local organizations that teachers can engage to assist, enhance and supplement their work with students. Teachers need not teach alone.

Teachers also cultivate knowledge about the character of the community and its effects on the school and students. They develop an appreciation of ethnic and linguistic differences, of cultural influences on students' aspirations and expectations, and of the effects of poverty and affluence. Cultural and other discontinuities between home and school frequently can confound teachers' efforts to promote learning. Conversely, the cultural diversity represented in many communities can serve as a powerful resource in teaching about other cultures, in encouraging tolerance and understanding of human differences, and in promoting civic ideals. Accomplished teachers seek to capitalize on these opportunities and to respond productively to students' diverse backgrounds.

There is a balance here. Schools and teachers cannot alleviate all the social problems that they encounter. Yet teachers confront the human condition daily in all its variety, splendor and misery. They must be humane, caring and responsive to students and their problems, while they maintain a focus on their distinctive professional responsibilities.

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## Conclusion

Accomplished teaching involves making difficult and principled choices, exercising careful judgment and honoring the complex nature of the educational mission. Teachers employ technical knowledge and skill, yet must be ever mindful of teaching's ethical dimensions. The primary mission is to foster the development of skills, dispositions and understanding, while responding thoughtfully to a wide range of human needs and conditions. Teachers owe joint allegiance to the forms and standards of knowledge within and across disciplines and to the students they serve.

They must acquire and employ a repertoire of instructional methods and strategies, yet remain critical and reflective about their practice, drawing lessons from experience. Teachers' professional responsibilities focus on instructing the students in their immediate care, while they participate as well in wider activities within the school and in partnership with parents and the community.

Teaching is often portrayed as an activity that conserves valued knowledge and skills by transmitting them to succeeding generations. It is that and more. Teachers also have the responsibility to question settled structures, practices, and definitions of knowledge; to invent and test new approaches; and, where necessary, to pursue change of organizational arrangements that support instruction. As agents of the public interest in a democracy, teachers through their work contribute to the dialogue about preserving and improving society, and they initiate future citizens into this ongoing public discourse. In the development of its assessment procedures and certification standards, the National Board has sought to represent these ideals faithfully and comprehensively.

Assertions about what teachers should know sometimes conceal inadequacies in the current state of knowledge. In this respect, teaching is not unlike other professions where practitioners confront unavoidable uncertainty in their work. However, the knowledge base for teaching is growing steadily. Professional consensus and research findings have begun to provide authoritative support for knowledge related to many of the tasks, responsibilities and results of teaching. But much remains to be learned.

The National Board draws on existing knowledge in developing its standards but also relies on the professional judgment of accomplished teachers and scholars in designing its assessment procedures. Recognizing that new knowledge about teaching is continually being formulated, the National Board continually reviews its work to reflect new findings and to update its standards and assessments as appropriate.

The National Board also considers the effects of school context on standards for teaching. The very existence of a National Board suggests common standards that prevail across teaching's many settings. However, teaching in an Alaskan village exacts demands different from teaching in Chicago. Teachers in both settings, though, blend and adapt their knowledge of teaching with their knowledge of the community in which they work to ensure effective student learning. For accomplished teachers, the wisdom of practice that they accrue depends on the settings in which they work, the communities they serve, and the students they encounter.

The assessment procedures developed by the National Board take context into account in a variety of ways. This is achieved by the use of assessment formats such as essays, videotaping and reflective commentaries. The National Board offers National Board Certification to all qualified

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teachers irrespective of the teaching environments in which they work. But the opportunities available to teachers to acquire and exercise many of the professional capacities and responsibilities endorsed by the National Board vary markedly from community to community. Some schools feature strong professional cultures whose norms support collaboration, innovative teaching, a high degree of collegiality, and participation in a broad array of professional activities. Other schools provide few such opportunities, and some even discourage such activity. To address this tension, the National Board's assessments acknowledge that there are multiple paths to meeting the standards, which take into account the diversity of teaching contexts.

These are the touchstones that guide the development of the National Board's certification standards and assessments. Our view of the responsibilities of the National Board Certified Teacher is deliberately complex and demanding, for this is how we see the work of American professional teachers, who are challenged to create excellence in education for all our nation's youth.

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