Weitman 01/02
NOTE: These standards are for use by institutions as they respond to the NCATE accreditation requirement for program review (and are subject to modification by specific agreements under NCATE-state partnerships).

- If your program submission for elementary teacher preparation is due September 15, 2000, you may elect to use these standards or to follow those previously in effect that were adopted in the fall of 1989.
- If your program submission is due February 1, 2001, or thereafter, the standards contained in this paper must be applied.

Approved by the Specialty Areas Studies Board
October 16, 1999 and February 5, 2000

The Program Standards are also available at NCATE’s Web site, www.ncate.org
and the web site for the Association for Childhood Education International (ACEI),
www.udel.edu/bateman/acei

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This edition of the *Program Standards for Elementary Teacher Preparation* was completed March 7, 2000 and replaces all earlier editions, including those that have previously appeared at the NCATE web site. While there are a few editorial changes that do not affect the substance of the standards or the requirements for submission, the following modifications are important for institutions preparing elementary program review submissions:

- **Submission dates**—References to submission dates for a context statement and candidate proficiency information have been made consistent with NCATE practice (that is, 18 months in advance of an initial visit or 12 months in advance of a continuing visit). The revised language appears in the “Synopsis,” page 5, and in Part II on institutional responsibilities, pages 36 and 38).

- **Phase-in period**—The description of minimum material that must be provided for review during the phase-in period has been revised. The new description on page 42 provides an explicit requirement to include a summary of performance data already available, as well as the plan for an assessment system.

- **Qualities of sound assessment systems**—Section B of the Appendix has a new introduction. The NCATE Specialty Areas Studies Board has adopted “Principles for Performance-Based Assessment Systems in Professional Education Programs.” Since these are meant to be for general use by institutions participating in NCATE program reviews and unit accreditation, they have been inserted as an introduction to the views of the elementary standards Drafting Committee about the qualities of sound assessment systems and evidence. The new text begins on page 47 and extends through the top of page 49.

EJE, NCATE, March 7, 2000
Synopsis

DESIGN OF PROGRAM STANDARDS

The Program Standards for Elementary Teacher Preparation contain standards for teacher candidates as they complete an elementary teacher preparation program in an NCATE accredited school, college or department of education. The standards, detailed in Part I of this paper, are grouped in five major categories:

- development, learning, and motivation
- curriculum
- instruction
- assessment, and
- professionalism

These closely follow the ten “model standards” for teacher licensure from the Interstate New Teacher Assessment and Support Consortium (INTASC), a project of the Council of Chief State School Officers. The INTASC models were made part of the NCATE “unit” accreditation standards in 1995. These Program Standards elaborate on those from INTASC for development, learning, and motivation; add detail on curriculum for the subject content of elementary teaching; and make collaboration with families a separate part of professionalism from collaboration with colleagues and the community. The intent is to align NCATE program standards with the work of INTASC and trends in state teacher licensure practices, and also to build on the moves toward the performance-based accreditation system that NCATE is developing.

The contents of these program standards for preparation of elementary teacher candidates reflect recent versions of standards for students and standards for teachers that have been prepared by national projects (such as the National Research Council science standards) or education associations (such as the National Council of Teachers of Mathematics standards). They differ from previous NCATE program standards in that they describe what teacher candidates should know and be able to do so that students learn, rather than what topics should be included in the teacher preparation coursework or the nature of field experiences offered to candidates.

The standards, and their accompanying supporting explanations, exhibit four

References to the title are frequently shortened to Program Standards in this paper.
complementary attributes for teacher candidates.

- First, many of them describe knowledge that candidates should possess about subject content, pedagogy, child development and learning, motivation, instruction, assessment and the qualities of a professional.
- A second group describes abilities that candidates should master to apply that knowledge effectively in the classroom and other professional teaching situations, including collaboration with colleagues.
- Third, some standards and explanations describe dispositions usually associated with candidates who go on to successful teaching careers.
- And, fourth, some sentences and phrases describe teacher candidates’ ability to have positive effects on student learning—the purpose of education.

The Program Standards include all four of these attributes within the phrase “what teacher candidates should know and be able to do so students learn,” or, alternatively, “teacher candidates know their subject and can teach so students learn.”

What makes the new approach to program review performance-based is the evidence that institutions are asked to provide. The essential feature is that institutions demonstrate—with assessment information—that candidates are proficient in the full scope of the standards, including evidence of positive effects on student learning. Teacher preparation units are no longer required to provide syllabi or to construct a matrix specifying the content of courses and experiences. This shift also builds on the 1995 NCATE unit standards. Current unit standards require that institutions monitor and assess the progress of candidates, establish and publish criteria or outcomes for exit, and provide candidates appropriate academic and professional advisement from admission through completion of their professional education programs. These new Program Standards make use of information from candidate monitoring and assessment.

As detailed in Part II, institutions seeking national recognition of their elementary preparation program are expected to offer information from candidate assessments and monitoring that demonstrates candidates’ mastery of the knowledge and skills included in the standards. That information would sample assessment results for candidates in a program—summarizing those results for the candidates as a group, rather than displaying performance of individuals—in a way that fairly represents the standards, including each of the four attributes described above. A context statement assists reviewers’ understanding of the program through complementary information, including the unit’s reasoned arguments for its actions in two critical areas: (1) opportunities the program provides so that candidates can learn and practice the content of standards, and (2) how the faculty have confidence in their judgments that candidates have mastered the institution’s expectations for program completers.

In the Appendix of the Program Standards, the Drafting Committee sets out its overriding view that student learning is the goal of teacher preparation. The Committee links its strategy for performance-based program review in teacher education with current state K-12 reforms, with state licensing and the Interstate New Teacher Assessment and Support Consortium, and with certification of accomplished teachers by the National
Board for Professional Teaching Standards. All are founded on the concept of setting explicit standards and measuring performance in relation to those standards. As applied to teacher preparation, the standards express what teacher candidates—as they complete their preparation program—should know and be able to do so that children learn.

State licensure tests, taken by candidates at program completion or during induction years, can serve as important sources of candidate proficiency information. Currently some licensure tests measure subject content knowledge, and a few examine knowledge of pedagogy in the content area. Such assessments are also important because they are used by states for accountability purposes in teacher preparation. But while these tests can provide necessary information about candidate knowledge, they are not sufficient, alone, to inform about proficiencies across all the standards set for candidates—knowledge, teaching, dispositions, and ability to have positive effects on student learning.

How, then, will decisions be made in the NCATE performance-based program review while state licensing requirements continue to evolve? In short, decisions will be made through comparisons: information on candidate proficiencies from an elementary preparation program will be compared with exemplars of such proficiencies identified through professional judgment.

As the Drafting Committee sees it, NCATE and the specialty organizations will identify and evaluate numerous examples of assessment exercises, each with explicit descriptions indicating the level of proficiency that is appropriate to expect of candidates completing their program. These examples, which the Committee calls “benchmarks,” will be available on the NCATE and specialty organization web sites, both alerting faculty to the expectations for program review, and guiding individuals who conduct those reviews. The Committee anticipates that institutions will gather candidate proficiency information from a variety of sources: the teacher preparation courses and field experiences, including samples of student work in classes where candidates teach; and also from external origins such as arts and sciences courses, state licensure exams and employer evaluations. Institutions will establish rubrics or criteria by which to judge candidates, then provide sampled and summarized results for the NCATE program review. Program reviewers will make holistic comparisons between the overall results from the institution and the proficiency “benchmark” levels.

The Appendix also expresses understandings of Committee members about what the current assessment state-of-the-art makes it possible to achieve in responsible assessments of elementary teacher candidate proficiencies. A sound system for performance evidence:

- Results from planned, purposeful, and continuing evaluation of candidate proficiencies, drawing on diverse sources;
- Represents the scope of the standards for elementary teacher preparation;
- Measures the different “attributes” of standards in appropriate and multiple ways;
- Results from rigorous and systematic efforts by the institution to set performance levels and judge accomplishments of its candidates;
• Provides information that is credible—accurate, consistent, fair and avoiding bias;
• Makes use of appropriate sampling and summarizing procedures.

And, of course, institutions with sound assessment systems use the data to improve programs and teaching, and to assist individual candidates.

CONTENT OF THE STANDARDS

What should elementary teacher candidates know and be able to do to have positive effects on student learning? This is the text of the standards for elementary teacher candidates excerpted from the pages in Part I.

DEVELOPMENT, LEARNING AND MOTIVATION

1. Development, Learning and Motivation--Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students’ development, acquisition of knowledge, and motivation.

CURRICULUM

2a. Central concepts, tools of inquiry, and structures of content--Candidates know, understand, and use the central concepts, tools of inquiry, and structures of content for students across the K-6 grades and can create meaningful learning experiences that develop students’ competence in subject matter and skills for various developmental levels;
2b. English language arts—Candidates demonstrate a high level of competence in use of English language arts and they know, understand, and use concepts from reading, language and child development, to teach reading, writing, speaking, viewing, listening, and thinking skills and to help students successfully apply their developing skills to many different situations, materials, and ideas;
2c. Science—Candidates know, understand, and use fundamental concepts in the subject matter of science—including physical, life, and earth and space sciences—as well as concepts in science and technology, science in personal and social perspectives, the history and nature of science, the unifying concepts of science, and the inquiry processes scientists use in discovery of new knowledge to build a base for scientific and technological literacy;
2d. Mathematics—Candidates know, understand, and use the major concepts, procedures, and reasoning processes of mathematics that define number systems and number sense, geometry, measurement, statistics and probability, and algebra in order to foster student understanding and use of patterns, quantities, and spatial relationships that can represent phenomena, solve problems, and manage data;
2e. Social studies—Candidates know, understand, and use the major concepts and modes of inquiry from the social studies—the integrated study of history, geography, the social sciences, and other related areas—to promote elementary students’ abilities to make informed decisions as citizens of a culturally diverse democratic society and interdependent world;
2f. The arts—Candidates know, understand, and use—as appropriate to their own understanding and skills—the content, functions, and achievements of dance, music, theater, and the several visual arts as primary media for communication, inquiry, and insight among elementary students;
2g. Health education—Candidates know, understand, and use the major concepts in the subject matter of health education to create opportunities for student development and practice of skills that contribute to good health;
2h. Physical education—Candidates know, understand, and use—as appropriate to their own understanding and skills—human movement and physical activity as central elements to foster active, healthy life styles and enhanced quality of life for elementary students;
2i. Connections across the curriculum—Candidates know, understand, and use the connections among concepts, procedures, and applications from content areas to motivate elementary students,
build understanding, and encourage the application of knowledge, skills, and ideas to real world issues.

**INSTRUCTION**

3a. Integrating and applying knowledge for instruction—Candidates plan and implement instruction based on knowledge of students, learning theory, subject matter, curricular goals, and community;
3b. Adaptation to diverse students--Candidates understand how elementary students differ in their development and approaches to learning, and create instructional opportunities that are adapted to diverse students;
3c. Development of critical thinking, problem solving, performance skills--Candidates understand and use a variety of teaching strategies that encourage elementary students' development of critical thinking, problem solving, and performance skills;
3d. Active engagement in learning--Candidates use their knowledge and understanding of individual and group motivation and behavior among students at the K-6 level to foster active engagement in learning, self motivation, and positive social interaction and to create supportive learning environments;
3e. Communication to foster collaboration—Candidates use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the elementary classroom.

**ASSESSMENT**

4. Assessment for instruction--Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

**PROFESSIONALISM**

5a. Practices and behaviors of developing career teachers—Candidates understand and apply practices and behaviors that are characteristic of developing career teachers;
5b. Reflection and evaluation—Candidates are aware of and reflect on their practice in light of research on teaching and resources available for professional learning; they continually evaluate the effects of their professional decisions and actions on students, parents, and other professionals in the learning community and actively seek out opportunities to grow professionally;
5c. Collaboration with families—Candidates know the importance of establishing and maintaining a positive collaborative relationship with families to promote the academic, social and emotional growth of children;
5d. Collaboration with colleagues and the community—Candidates foster relationships with school colleagues and agencies in the larger community to support students’ learning and well-being.

**REQUIREMENTS FOR INSTITUTIONAL SUBMISSIONS**

There are two parts to institutional submissions. These replace all requirements for overview information, as well as syllabi and matrices detailing course contents and experiences offered in elementary teacher preparation programs.

Eighteen months prior to an expected Board of Examiners visit for initial unit accreditation, or twelve months prior to a continuing visit, each institution offering an elementary teacher preparation program will submit:

1. A summary description of the context in which the program is conducted. This statement, ranging from 20 to 30 pages, will contain any information that institutional representatives believe reviewers should take into account while judging the quality of the program through candidate performance. The context statement is also to include the institution’s strongest, reasoned case: (a) demonstrating its opportunities for candidates to learn and practice the content of the standards, and (b) showing how faculty have confidence in their judgments that candidates have mastered the institution’s expectations for program completers.
2. Performance material, not exceeding 140 pages including attachments, that summarizes the knowledge and skills proficiencies of elementary teacher candidates as a group. This information constitutes the primary evidence upon which a judgment of national program recognition will be made.

PREFACE

The National Council for Accreditation of Teacher Education (NCATE) is developing a “performance-based” approach to program quality review in accreditation. The pilot area is standards for elementary teacher preparation programs. The concept, in brief, is that “performance” information that describes elementary teacher candidate knowledge and ability to teach—“outputs”—would become the basis for decisions on the quality of elementary teacher preparation programs. The new approach would replace information about course offerings and experiences—“inputs”—as the basis for determining program quality.

The Program Standards for Elementary Teacher Preparation were prepared by a Committee whose work was supported by the Pew Charitable Trusts, the Carnegie Corporation of New York, the MacArthur Foundation, and an anonymous benefactor. In addition, the assessment portions of the standards, in Part II and the Appendix of the paper, were supported in part by the Office of Educational Research and Improvement through the National Partnership for Excellence and Accountability in Teaching. The reader should not assume any endorsement from the federal government of this project.

The Drafting Committee for these standards was comprised of representatives from 19 associations, organizations or projects, fourteen of which are NCATE constituent members, including the following:

- American Alliance for Health, Physical Education, Recreation and Dance/National Association for Sport and Physical Education (AAHPERD)
- American Association for Colleges of Teacher Education (AACTE)
- Association for Childhood Education International (ACEI)
- Association for Teacher Education (ATE)
- Council for Exceptional Children (CEC)
- International Reading Association (IRA)
- National Association for Education of Young Children (NAEYC)
- National Association of Elementary School Principals (NAESP)
- National Council for the Social Studies (NCSS)
- National Council of Teachers of English (NCTE)
- National Council of Teachers of Mathematics (NCTM)
- National Education Association (NEA)
- National Middle School Association (NMSA)
- National Science Teachers Association (NSTA)

Six additional representatives broadened the Committee’s expertise and its connections with related NCATE efforts. Two Committee members, experienced in curriculum, teacher preparation, and accreditation issues, came from the Council for Basic Education (CBE) and the National Office for Arts Accreditation in Higher Education (NOAAHE). Two individuals represented the collective developmental work of states on licensure standards and assessments with the Council of Chief State School Officers "Interstate New Teacher Assessment and Support Consortium (INTASC)" project. And, finally, two Committee members represented NCATE’s organizational interests in performance standards from a program quality perspective, the Specialty Areas Studies Board (SASB) and the State Partnership Board (SPB) program.

The members of the NCATE elementary program standards Drafting Committee, and their positions during the preparation of the standards, were:

- Ron Areeglado, Associate Executive Director of Programs, NAESP, Alexandria, Virginia
- Pauletta Bracy, Associate Professor, School of Library and Information Sciences, North Carolina
Members of the Committee want to acknowledge and thank John Hattie who has served as a consultant for the Committee’s work. While he worked with us, Dr. Hattie was Professor and Chair of Educational Research Methodology at the University of North Carolina at Greensboro. He has recently returned to his native New Zealand to accept the post of Dean of the school of education at the University of Auckland.

The results of Dr. Hattie’s expertise, mentoring, and congenial good sense are especially prominent in Part II and the Appendix of this paper dealing with performance measurement issues, but are reflected throughout. The Committee and I also want to thank Nelda Owsiak and Craig McClellan of the NCATE staff who not only ensured that the Committee’s meetings were expertly arranged, but who made lively contributions to the deliberations and assured a valuable flow of information among us.

Emerson J. Elliott, Director
Program Standards Development Project
NCATE
September 27, 1999
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3. Measures the different “attributes” of standards in appropriate and multiple ways

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Part I: Standards for Candidates Preparing to Teach Elementary Students

A. INTRODUCTION

A perspective on teaching elementary students

New candidates for elementary teaching must be committed to elementary students and their learning. They must be prepared to act on a belief that all elementary students have potential for learning rigorous content and achieving high standards. The Committee interprets the phrase, “all elementary children” to be inclusive, comprising students of diverse ethnicity, race, language, religion, socioeconomic status, gender, regional or geographic origin, and those with exceptional learning needs.

A consensus has been developing over the past two decades--informed by research and tested through practice--about what qualities of knowledge and skill, or what "performances" the nation expects of teachers. This growing consensus served as the foundation for the 1996 report of the National Commission on Teaching and America's Future, What Matters Most: Teaching for America's Future. It is exhibited in the work of the National Board for Professional Teaching Standards (NBPTS) for recognizing accomplished teachers, and of the Interstate New Teacher Assessment and Support Consortium (INTASC) for teacher licensure. Many efforts of groups, projects, associations, and teacher education institutions to improve the quality, rigor, and content of teacher education programs build on this consensus as well. Put briefly, the consensus is that teacher knowledge is central to student success. The Commission report stated it this way:
What teachers know and do is the most important influence on what students learn. Competent and caring teaching should be a student right.

Research has discovered a great deal about effective teaching and learning: We know that students learn best when new ideas are connected to what they already know and have experienced; when they are actively engaged in applying and testing their knowledge using real-world problems; when their learning is organized around clear, high goals with lots of practice in reaching them; and when they can use their own interests and strengths as springboards for learning. When teachers can work together to build a coherent learning experience for students throughout the grades and within and across subject areas--one that is guided by common curriculum goals and expectations--they are able to engender greater student achievement.

We also know that expert teachers use knowledge about children and their learning to fashion lessons that connect ideas to students' experiences. They create a wide variety of learning opportunities that make subject matter come alive for young people who learn in very different ways. They know how to support students' continuing development and motivation to achieve while creating incremental steps that help students progress toward more complicated ideas and performances. They know how to diagnose sources of problems in students' learning and how to identify strengths on which to build. These skills make the difference between teaching that creates learning and teaching that just marks time.

Needless to say, this kind of teaching requires high levels of knowledge and skill. To be effective, teachers must know their subject matter so thoroughly that they can present it in a challenging, clear, and compelling way. They must also know how their students learn and how to make ideas accessible so that they can construct successful "teachable moments." Research confirms that teacher knowledge of subject matter, student learning, and teaching methods are all important elements of teacher effectiveness.

The Commission went on to say:

To help diverse learners master much more challenging content, teachers must go far beyond dispensing information, giving a test, and assigning a grade. They must themselves know more about the foundations of subject areas, and they must understand how students think as well as when they know in order to create experiences that produce learning. Moreover, as students with a wider range of learning needs enter and stay in school--a growing number whose first language is not English, many others with learning differences, and others with learning disabilities--teachers need access to the growing knowledge that exists about how to teach these learners effectively.
Alignment with INTASC

The NCATE elementary teaching accreditation standards Drafting Committee shared the Commission’s perspective. The Committee sought to make its work compatible with INTASC and the states as they develop licensure standards and performance assessments. Many states have already made use of the INTASC standards, which are developed to be congruent with those of the National Board for Professional Teaching Standards, and several states are participating in INTASC developmental projects for portfolio assessments and a test-of-teacher-knowledge. The Committee learned that states did not want NCATE standards that were incompatible with INTASC and state work—and the Committee wanted to avoid such a result as well. Moreover, institutions did not want to face the prospects of differing or conflicting standards as they attempted to prepare their teacher candidate graduates for state licensure on the one hand and their institution for NCATE accreditation on the other. For these reasons, the Committee decided to build its standards around the INTASC framework as presented in its 1992 publication, Model Standards for Beginning Teacher Licensing and Development: A Resource for State Dialogue.

Developmental foundations

Both INTASC and the National Board for Professional Teaching Standards give prominence in their standards to teachers' understanding of the developmental needs and emerging abilities of children as a fundamental requirement for effective teaching. Understanding children and young adolescents is the foundation for NCATE curriculum guidelines prepared by the National Association for Education of Young Children (spanning birth through age eight) and by the National Middle School Association (covering grades five through eight). The Committee sought to base the Program Standards, similarly, in developmental concerns. For this reason it has placed a standard on development first among the teacher candidate standards.

K-6 grade span

The Committee has adopted a K-6 span in its standards to serve two purposes:

- first, to make a statement that there is need for elementary standards. The developmental ages to be covered would be too great to expect of new teacher candidates if the NMSA standards were extended down and the NAEYC standards extended up to cover these grades. This Committee action is also compatible with the child developmental emphasis in standards developed by the National Board for Professional Teaching Standards. The Board has organized its standards around ages of students, including: Early Childhood
Generalist, ages 3-8; Middle Childhood Generalist, ages 7-12; and Early Adolescence Generalist, ages 11-15. With the Committee’s elementary standards, NCATE would have three overlapping sets of generalist standards—for early childhood (NAEYC), elementary, and grades 5-9 (NMSA)—similar to the NBPTS arrangement.

- second, to be practical for use across states with differing licensure grade-span requirements. Many states still license on a K-6 basis, so K-6 standards will frequently be compatible with state practice. But the intentional overlap with NAEYC standards at the younger ages and NMSA standards at the upper elementary level also means that teacher education programs can draw the guidance they need from one or more of the developmentally-based trio of NCATE standards in order to accommodate state licensure grade grouping patterns.

B. STANDARDS

Structure of the standards

In the pages below, each Committee standard begins with a number, or number/letter, designation and is printed in bold face type. The text of these standards is taken principally from language of the INTASC model standards, but (1) elaborates, in the development standard, on INTASC, (2) provides additions, in the curriculum section, emphasizing underlying concepts, structures and modes of inquiry for elementary teaching subject knowledge, and (3) gives separate emphasis to families in the professionalism standard. In framing the standards, the Committee made decisions about the range of knowledge and abilities that candidates should master and also about the structure of the Part I standards:

- The curriculum portion of the standards is built around academic disciplines. The Committee views core academic disciplines as enduring structures to understand knowledge, as means of representing the content of knowledge, and as ways to comprehend substantive issues. The Committee decided that an alternative to organize curriculum standards around problems would not be a useful move because problems change over time. Moreover, problems can best be understood through the lenses provided by traditional disciplines.

- The language of the standards is intentionally written in a common style. Candidates are expected to “know,” as a threshold, but also to “understand” in a more comprehensive, thorough way that permits interpretation of the content in each standard. Candidates must also be able to apply their knowledge and understanding of content to teaching all elementary students so that those students develop as knowledgeable, responsible, and caring individuals.
• The standards are followed by supporting explanations that describe what Drafting Committee members believe is important within each topic, with an emphasis on what elementary students are expected to learn. These paragraphs can guide both candidates and institutions as to NCATE's expectations for the content dimension of candidate information in a performance-based program review.

• Finally, each section of the standards concludes with references to source documents used by the Committee in preparing the Program Standards. The first group of references, below, lists material pertinent to all topics covered by the elementary teacher accreditation standards. For assistance to faculty who are building and strengthening their elementary teacher programs, these and other publications may be identified through the ACEI web site (www.udel.edu/bateman/acei), as well as on the web sites for many of the NCATE constituent organizations whose representatives participated in writing the Program Standards.

Throughout these pages the Committee has chosen definitions for terms to convey specific meanings. The phrases “all children,” “elementary students” and “K-6 students” are meant to be inclusive, comprising children of diverse ethnicity, race, language, religion, socioeconomic status, gender, regional or geographic origin, and children with exceptional learning needs. They are also intended to be inclusive of young adolescents who are enrolled in upper elementary grades. The term “specialists” is interpreted broadly by the Committee to include teaching specialists, special educators, teachers of English as a second language, librarians, counselors and other school resource personnel. To avoid confusion, students preparing to teach are referred to consistently as “candidates” or “teacher candidates,” while elementary pupils are referred to as students, elementary students, or children.

Connections among the standards

The Committee urges that institutions prepare elementary teaching candidates to find and make connections among the standards. The text in standard 2.i emphasizes such connections within the curricular subject areas. The standards and explanations also incorporate numerous references to instruction that are specific to curricular areas, as well as references throughout to relationships among developmental knowledge and instruction. In fact, there are overlapping and close relationships among all the standards across development, curricular, instructional, assessment, and professionalism topics. Readers will also find emphasis on these connections in Part III on qualities of performance evidence.
Source Documents for the Program Standards

The following publications were used by the Drafting Committee in shaping the form and content of standards in Part I:

Model Standards for Beginning Teacher Licensing and Development: A Resource for State Dialogue, INTASC, CCSSO, 1992

Middle Childhood/Generalist Standards for National Board Certification, National Board for Professional Teaching Standards, 1996

Preparation of Early Childhood Teachers, Association for Childhood Education International, position paper, no date

Preparation of Elementary Teachers, Association for Childhood Education International, position paper, Spring, 1997


Elementary Education Teaching Standards, Connecticut State Department of Education, 1996 draft

DEVELOPMENT, LEARNING, AND MOTIVATION

Standard

1. Development, learning, and motivation--Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students' development, acquisition of knowledge, and motivation.
Supporting explanation

Candidates for elementary teaching base their teaching and related professional responsibilities on a thorough understanding of developmental periods of childhood and early adolescence. In curriculum planning, instruction, and assessment of student learning, they consider, accommodate, and integrate the physical, social, emotional, cognitive, and linguistic developmental characteristics of children and young adolescents. Candidates draw on developmental knowledge to plan curriculum that is achievable but also challenging for children at various developmental levels. They draw upon an in-depth knowledge of child and young adolescent development and learning to understand students’ abilities, interests, individual aspirations, and values, and they adapt curriculum and teaching to motivate and support student learning and development. Candidates for elementary teaching understand that the ways in which cultures and social groups differ are important and affect learning. They recognize when an individual student’s development differs from typical developmental patterns and collaborate with specialists to plan and implement appropriate learning experiences that address individual needs. Candidates know that all children can learn when developmental factors are recognized, respected, and accommodated, and they demonstrate that knowledge in their practice. They consider diversity an asset and respond positively to it.

Source documents for Development, Learning, and Motivation

NAEYC Position Statement on Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8, National Association for Education of Young Children, 1997


Draft Standards for Teachers of Middle Childhood, Indiana Professional Standards Board, 1996

Standard

2a. Central concepts, tools of inquiry, and structures of content--Candidates know, understand, and use the central concepts, tools of inquiry, and structures of content for students across the K-6 grades and can create meaningful learning experiences that develop students' competence in subject matter and skills for various developmental levels;

Standard

2b. English language arts--Candidates demonstrate a high level of competence in use of the English language arts and they know, understand, and use concepts from reading, language and child development, to teach reading, writing, speaking, viewing, listening, and thinking skills and to help students successfully apply their developing skills to many different situations, materials, and ideas;

Supporting explanation

Candidates are adept at teaching the fundamentals of the English Language Arts. They model effective use of English, including its syntax, lexicon, history, varieties, literature, and oral and written composing processes. Candidates understand how elementary children develop and learn to read, write, speak, view, and listen effectively. They use their knowledge and understanding of language, first and second language development, and the language arts to design instructional programs and strategies that build on students' experiences and existing language skills and result in their students becoming competent, effective users of language.

They teach students to read competently and encourage students' enjoyment of reading through multiple instructional strategies, technologies, and a variety of language activities. Candidates teach children to read with a balanced instructional program that includes an emphasis on use of letter/sound relationships (phonics), context (semantic and syntactic), and text that has meaning for students. In addition, candidates teach students a variety of strategies to monitor their own reading comprehension. They are also familiar with, able to use, and recommend to students many reading materials based on different topics, themes, and a variety of situations and consisting of different types, including stories, poems, biography, non-fiction, many categories of literature written for children, and texts from various subject areas. As a part of teaching students how to read, candidates encourage elementary students’ understanding of their individual responses to what they read and sharing those responses. They help students think critically about what they read.
Candidates provide both instruction in and opportunities for elementary students to develop effective writing and speaking skills so that they can communicate their knowledge, ideas, understanding, insights, feelings, and experiences to other students and to parents, teachers, and other adults. They provide their students with many different writing and speaking experiences in order to teach the skills of writing and speaking. They enable students to explore the uses of different types of writing and speaking with different audiences and in different situations. Candidates help students develop their capacities to listen so that they understand, consider, respond to, and discuss spoken material, including non-fiction, stories, and poems.

Candidates know what preconceptions, error patterns, and misconceptions they may expect to find in students' understanding of how language functions in communication, and they are able to help students correct their misunderstandings of the development and uses of language. Candidates use formative and summative assessment to determine the level of students' competence in their understanding of and use of language. They use the results of such assessment to plan further instruction.

**Source documents for English Language Arts**

*Guidelines for the Preparation of Teachers of English Language Arts*, National Council of Teachers of English, 1996 edition

*Standards for the English Language Arts*, National Council of Teachers of English and the International Reading Association, 1996

*Standards for Reading Professionals*, International Reading Association, 1998

*Preventing Reading Difficulties in Young Children*, Committee on the Prevention of Reading Difficulties in Young Children, Catherine E. Snow, M. Susan Burns, and Peg Griffin, editors; National Research Council, 1998
Standard

2c. Science--Candidates know, understand, and use fundamental concepts in the subject matter of science—including physical, life, and earth and space sciences—as well as concepts in science and technology, science in personal and social perspectives, the history and nature of science, the unifying concepts of science, and the inquiry processes scientists use in discovery of new knowledge to build a base for scientific and technological literacy;

Supporting explanation

Candidates have a broad general understanding of science and they teach elementary students the nature of science, and the content and fundamentals of physical, life, earth and space sciences, and their interrelationships. They are familiar with, and teach, the major concepts and principles that unify all scientific effort and that are used in each of the science disciplines: (1) systems, order, and
Candidates engage elementary students in the science inquiry process that involves asking questions, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically about relationships between evidence and explanations, constructing and analyzing alternative explanations, and communicating scientific arguments and explanations. They introduce students to understandings about science and technology and to distinctions between natural objects and objects made by humans by creating experiences in making models of useful things, and by developing students’ abilities to identify and communicate a problem, and to design, implement, and evaluate a solution. They know naive theories and misconceptions most children have about scientific and technological phenomena and help children build understanding. Candidates understand the use of assessment through diverse data-collection methods as ways to inform their teaching and to help students learn scientific inquiry, scientific understanding of the natural world, and the nature and utility of science.

**Source documents for science**

*National Science Education Standards*, National Academy Press, especially chapters 3, Science Teaching Standards, 4, Standards for Professional Development for teachers of Science, and 6, Science Content Standards, 1996


*Benchmarks for Science Literacy*, Project 2061, American Association for the Advancement of Science, Oxford University Press, 1993

*The Future of Science in Elementary Schools: Educating Prospective Teachers*, Senta A. Raizen and Arie M. Michelsohn, editors, The National Center for Improving Science Education, 1994

*NCATE Program Standards*, "Programs for Initial Preparation of Teachers of Science," prepared by the National Science Teachers Association, approved by National Council for Accreditation of Teacher Education, 1998

*Technology for All Americans: A Rationale and Structure for the Study of Technology*, International Technology Education Association, 1996

*Standards for Technology: Content for the Study of Technology, International Technology Education Association, March, 1999*
Standard

2d. Mathematics--Candidates know, understand, and use the major concepts, procedures, and reasoning processes of mathematics that define number systems and number sense, geometry, measurement, statistics and probability, and algebra in order to foster student understanding and use of patterns, quantities, and spatial relationships that can represent phenomena, solve problems, and manage data;

Supporting explanation

Candidates are able to teach elementary students to explore, conjecture, and reason logically using various methods of proof; to solve non-routine problems; to communicate about and through mathematics by writing and orally using everyday language and mathematical language, including symbols; to represent mathematical situations and relationships; and to connect ideas within mathematics and between mathematics and other intellectual activity. They help students understand and use measurement systems (including time, money,
temperature, two and three dimensional objects using non-standard and standard customary and metric units); explore pre-numeration concepts, whole numbers, fractions, decimals, percents and their relationships; apply the four basic operations (addition, subtraction, multiplication, and division) with symbols and variables to solve problems and to model, explain, and develop computational algorithms; use geometric concepts and relationships to describe and model mathematical ideas and real-world constructs; as well as formulate questions, and collect, organize, represent, analyze, and interpret data by use of tables, graphs, and charts. They also help elementary students identify and apply number sequences and proportional reasoning, predict outcomes and conduct experiments to test predictions in real-world situations; compute fluently; make estimations and check the reasonableness of results; select and use appropriate problem-solving tools, including mental arithmetic, pencil-and-paper computation, a variety of manipulatives and visual materials, calculators, computers, electronic information resources, and a variety of other appropriate technologies to support the learning of mathematics. Candidates know and are able to help students understand the history of mathematics and contributions of diverse cultures to that history. They know what mathematical preconceptions, misconceptions, and error patterns to look for in elementary student work as a basis to improve understanding and construct appropriate learning experiences and assessments.

Source documents for mathematics


*Curriculum and Evaluation Standards for School Mathematics*, NCTM, 1989


*Assessment Standards for School Mathematics*, NCTM, 1995

*NCATE Program Standards*, “Programs for Initial Preparation of Teachers of Mathematics,” prepared by the National Council of Teachers of Mathematics, approved by the National Council for Accreditation of Teacher Education, 1998
Standard

2e. Social studies--Candidates know, understand, and use the major concepts and modes of inquiry from the social studies--the integrated study of history, geography, the social sciences, and other related areas--to promote elementary students' abilities to make informed decisions as citizens of a culturally diverse democratic society and interdependent world;

Supporting explanation

The social studies include history, geography, the social sciences (such as anthropology, archaeology, economics, political science, psychology, and sociology) and other related areas (such as humanities, law, philosophy, religion, mathematics, science and technology). Candidates are able to use knowledge, skills, and dispositions from social studies to organize and provide integrated instruction in grades K-6 for the study of major themes, concepts and modes of
inquiry drawn from academic fields that address: (1) culture; (2) time, continuity, and change; (3) people, places, and environment; (4) individual development and identity; (5) individuals, groups, and institutions; (6) power, governance, and authority; (7) production, distribution, and consumption; (8) science, technology, and society; (9) global connections; and (10) civic ideals and practices.

Candidates use their knowledge of social studies to help students learn about academic fields of knowledge, as well as major themes that integrate knowledge across academic fields. They develop experiences to help elementary students learn about the historical development of democratic values; the basic principles of government and citizenship in a democratic republic; the past, present, and future; spatial relations; the development of nations, institutions, economic systems, culture, and cultural diversity; the influences of belief systems; and the humanities. Candidates are able to help students read, write, listen, discuss, speak, and research to build background knowledge; examine a variety of sources (e.g., primary and secondary sources, maps, statistical data, and electronic technology-based information); acquire and manipulate data; analyze points of view; formulate well-supported oral and written arguments, policies, and positions; construct new knowledge and apply knowledge in new settings. They use formative and summative assessments in planning and implementing instruction.

Source documents for social studies


*National Standards for History*, National Center for History in the Schools, 1996

*Geography for Life: National Geography Standards*, The Geographic Education Standards Project, National Geographic Society, 1994


*National Standards for Civics and Government*, Center for Civic Education, 1994
Standard

2f. The arts—Candidates know, understand, and use—as appropriate to their own knowledge and skills—the content, functions, and achievements of dance, music, theater, and the several visual arts as primary media for communication, inquiry, and insight among elementary students;

Supporting explanation

Candidates understand distinctions and connections between arts study and arts experiences. They recognize that arts instruction must be sequential. Candidates encourage the kind of study and active participation that leads to competence and appreciation. Consistent with their own knowledge and skills in the arts disciplines, they work alone, with arts specialist teachers, and/or with other qualified arts professionals enabling students: (1) to communicate at a basic level in the four arts disciplines--dance, music, theater, and the visual arts-- including knowledge and skills in the use of basic vocabularies, materials, traditional and technology-based tools, techniques, and thinking processes of each arts discipline; (2) to develop and present basic analyses of works of art from structural, historical, and cultural perspectives; (3) to have an informed acquaintance with exemplary works of art from a variety of cultures and historical periods; and (4) to relate basic types of arts knowledge and skills within and across the arts disciplines, and to make connections with other disciplines. Candidates understand that student competence at a basic level serves as the foundation for more advanced work. They understand that there are many routes to competence, that elementary students may work in different arts at different times, that their study may take a variety of approaches, and that their abilities may develop at different rates.

Source document for the arts

*National Standards for Arts Education; What Every Young American Should Know and Be Able to Do in the Arts*, Consortium of National Arts Education Associations (American Alliance for Theatre & Education, Music Educators National Conference, National Art Education Association, and National Dance Association), 1994
Standard

2g. Health education--Candidates know, understand, and use the major concepts in the subject matter of health education to create opportunities for student development and practice of skills that contribute to good health;

Supporting explanation

Candidates understand the foundations of good health, including the structure and function of the body and its systems and the importance of physical fitness and sound nutrition. They help students understand the benefits of a healthy lifestyle for themselves and others as well as the dangers of diseases and activities that may contribute to disease. Teacher candidates are alert to major health issues concerning children and the social forces that affect them, and of the need to impart information on these issues sensitively. They address issues in ways that help students recognize potentially dangerous situations, clarify misconceptions, and find reliable sources of information.

Source document for health education

National Health Education Standards; Achieving Health Literacy, Joint Committee on National Health Education Standards (Association for the Advancement of Health Education, American School Health Association, American Public Health Association), American Cancer Society, 1995
Standard

2h. Physical education—Candidates know, understand, and use—as appropriate to their own understanding and skills—human movement and physical activity as central elements to foster active, healthy life styles and enhanced quality of life for elementary students;

Supporting explanation

Candidates understand physical education content relevant to the development of physically educated individuals. They structure learning activities to ensure that students demonstrate competence in many movement forms, and can apply movement concepts and principles to the learning and development of motor skills. Teacher candidates know that physical inactivity is a major health risk factor in our society and recognize the critical importance of physically active life styles for all students. They help students develop knowledge and skills necessary to achieve and maintain a health-enhancing level of physical fitness. Teacher candidates appreciate the intrinsic values and benefits associated with physical activity. They are able to structure movement experiences that foster opportunities for enjoyment, challenge, self-expression, and social interaction, and that elicit responsible personal and social behavior and respect for individual differences among people in physical activity.

Source documents for physical education

*Moving Into the Future; National Standards for Physical Education*, National Association for Sport and Physical Education, 1995

*National Standards for Beginning Physical Education Teachers*, Beginning Teacher Standards Task Force of the National Association for Sport and Physical Education, the American Alliance for Health, Physical Education, Recreation and Dance, 1995
2i. Connections across the curriculum--Candidates know, understand, and use the connections among concepts, procedures, and applications from content areas to motivate elementary students, build understanding, and encourage the application of knowledge, skills, tools, and ideas to real world issues.

Supporting explanation

In their instruction, candidates make connections across the disciplines and draw on their knowledge of developmental stages to motivate students, build understanding, and encourage the application of knowledge, skills, and ideas to lives of elementary students across fields of knowledge and in real world situations. Candidates help elementary students learn the power of multiple perspectives to understand complex issues. Through personal actions and teaching, they demonstrate scholarly habits of mind, including: (1) a desire to know, (2) constructive questioning, (3) use of information and systematic data, (4) acceptance of ambiguity where it exists, (5) willingness to modify explanations, (6) a cooperative manner in responding to questions and solving problems, (7) respect for reason, imagination, and creativity and (8) honesty.
INSTRUCTION

Standard

3a. Integrating and applying knowledge for instruction—Candidates plan and implement instruction based on knowledge of students, learning theory, subject matter, curricular goals, and community;

Supporting explanation

Candidates understand learning theory, subjects taught in elementary schools
(described in sections 2a through 2i of the *Program Standards*), curriculum development, and student development and know how to use this understanding in planning instruction to meet curriculum goals. They are able to help students appreciate and be engaged in the subject matter. Candidates select and create learning experiences that are appropriate for curriculum goals, meaningful to elementary students, and based upon principles of effective teaching (e.g. that activate students' prior knowledge, anticipate preconceptions, encourage exploration and problem-solving, and build new skills on those previously acquired). They use a variety of resources, including technology and textbooks, and look beyond their classroom to determine how numerous information resources in both print and electronic form might benefit their students. Candidates understand and use appropriate technology to help students become capable technology users through communication; through access, management, analysis and problem solving with information; and through collaborative and self-directed learning. They collaborate with specialists to promote learning in all areas of the curriculum for all elementary students.

**Source documents for planning and implementing instruction**

*Draft Standards for Teachers of Middle Childhood*, Indiana Professional Standards Board, 1996

Standard

3b. Adaptation to diverse students—Candidates understand how elementary students differ in their development and approaches to learning, and create instructional opportunities that are adapted to diverse students;

Supporting explanation

Candidates understand and can identify differences in approaches to learning and performance, including different learning styles, and ways students demonstrate learning. They understand how elementary students' learning is influenced by individual experiences, talents, disabilities, and prior learning, as well as language, culture, family, and community values. Candidates know how to seek assistance and guidance from specialists and other resources to address elementary students’ exceptional learning needs and understand the importance of collaboration with specialists and families. They identify and design instruction appropriate to K-6 students' levels of development, learning styles, strengths, and needs, using teaching approaches that are sensitive to the multiple experiences of students. Candidates plan instructional tasks and activities appropriate to the needs of students who are culturally diverse and those with exceptional learning needs in elementary schools. They are able to apply knowledge of the richness of contributions from diverse cultures to each content area studied by elementary students.

Standard

3c. Development of critical thinking, problem solving and performance skills—Candidates understand and use a variety of teaching strategies that encourage elementary students' development of critical thinking, problem solving, and performance skills;

Supporting explanation

Candidates understand cognitive processes associated with various kinds of learning and how these processes can be stimulated. They also understand principles and techniques, advantages and limitations, associated with appropriate teaching strategies (e.g. cooperative learning, direct instruction, inquiry, whole group discussion, independent study, interdisciplinary instruction). Candidates know how to enhance learning through use of a wide variety of materials as well as collaboration with specialists, other colleagues, and technological resources, and through multiple teaching and learning strategies that will promote development of critical thinking, problem solving, and performance capabilities.
Standard

3d. Active engagement in learning—Candidates use their knowledge and understanding of individual and group motivation and behavior among students at the K-6 level to foster active engagement in learning, self motivation, and positive social interaction and to create supportive learning environments;

Supporting explanation

Teacher candidates understand principles of effective classroom management as well as human motivation and behavior from the foundational sciences of psychology, anthropology, and sociology. They use a range of strategies and can collaborate with specialists to promote positive relationships, cooperation, conflict resolution, and purposeful learning in the classroom. They create learning communities in which elementary students assume responsibility for themselves and one another, participate in decision making, work collaboratively and independently, and engage in purposeful learning activities. They understand and use appropriate and effective interpersonal and small group communication techniques to create an effective learning environment.

Standard

3e. Communication to foster learning—Candidates use their knowledge and understanding of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the elementary classroom.

Supporting explanation

Candidates understand communication theory, language development, and the role of language in learning among elementary students, and they also understand how cultural and gender differences can affect communication in the classroom. They model effective communication strategies in conveying ideas and information and in asking questions (e.g. monitoring the effects of messages; restating ideas and drawing connections; using visual, aural, and kinesthetic cues; being sensitive to nonverbal cues given and received). They use oral and written discourse between themselves and their students, and among students, to develop and extend elementary students' understanding of subject matter. Candidates know how to use a variety of media communication tools, including audio-visual aids and computer-based technologies, to enrich learning opportunities.
ASSESSMENT

Standard

4. Assessment for instruction—Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

Supporting explanation

Candidates know that assessment is an essential and integral part of instruction. It defines the beginning point; helps identify objectives, materials and effective teaching methods or techniques; and informs the need to re-teach or adapt instruction. They understand the characteristics, uses, advantages, and limitations of different types of assessment appropriate for evaluating how K-6 students learn, what they know, and what they are able to do in each subject area. Candidates recognize that many different assessment tools and strategies, accurately and systematically used, are necessary for monitoring and promoting learning for each student. Elementary teacher candidates appropriately use a variety of formal and informal assessment techniques (e.g. observation, portfolios of elementary student work, teacher-made tests, performance tasks, projects, student self-assessments, peer assessment, and standardized tests) to enhance their knowledge of individual students, evaluate students’ progress and performances, modify teaching and learning strategies, and collaborate with specialists on accommodating the needs of students with exceptionalities. Candidates use formative and summative assessments to determine student understanding of each subject area and take care to align assessments with instructional practice. They are aware that technology can facilitate appropriate forms of assessment and provide evidence across multiple dimensions of student performance. They use technology to improve the efficiency and effectiveness of assessment processes and in management of instruction. Candidates also monitor their own teaching strategies and behavior in relation to student success, modifying plans and instructional approaches accordingly.

Source document for assessment

PROFESSIONALISM

Standard

5a. Practices and behaviors of developing career teachers—Candidates understand and apply practices and behaviors that are characteristic of developing career teachers;

Supporting explanation

While synthesis of knowledge is a lifetime process for a professional, by the end of teacher preparation candidates ready to enter the classroom as elementary generalist teachers should be: [1] working independently on a variety of disciplinary and pedagogical problems and responsibilities by combining as appropriate their knowledge and skills in (a) child development; (b) English language arts, science, mathematics, social studies, the arts, health and physical education, (c) instructional technique and learning technologies, and (d) assessment; [2] focusing and defending independent analyses and value judgments about disciplinary content and teaching methodologies, their various potential relationships, and their applications to specific circumstances; [3] acquiring the intellectual tools to work with evolving issues and conditions as time and situations change, including the ability to make wise decisions according to time, place, and population; [4] identifying, accessing, and using technology-based resources in support of their continuing professional development; [5] demonstrating awareness of and commitment to the profession's codes of ethical conduct; and [6] understanding basic interrelationships and interdependencies among the various professions and activities that constitute the disciplines, content, and processes of elementary education.

Source documents for professional competence

*Code of Ethics of the Education Profession*, National Education Association Representative Assembly, adopted in 1975

*Code of Ethics*, American Federation of Teachers, adopted in 1971

*Code of Ethical Conduct and Statement of Commitment*, S. Feeney and K. Kipnis, NAEYC, 1992
Standard

5b. Reflection and evaluation—Candidates are aware of and reflect on their practice in light of research on teaching and resources available for professional learning; they continually evaluate the effects of their professional decisions and actions on students, parents, and other professionals in the learning community and actively seek out opportunities to grow professionally;

Supporting explanation

Candidates understand methods of inquiry that provide them with a variety of self-assessment and problem solving strategies for reflecting on their practice, its influences on K-6 students’ growth and learning, and the complex interactions between them. They know major areas of research on teaching and of resources available for professional learning (e.g. professional literature, colleagues, professional associations, professional development activities). They use classroom observation, information about students, and research as sources for evaluating the outcomes of teaching and learning and as a basis for experimenting with, reflecting on, and revising practice. Candidates apply their knowledge of current research and national, state, and local guidelines relating to the disciplines taught in elementary school.

Standard

5c. Collaboration with families—Candidates know the importance of establishing and maintaining a positive collaborative relationship with families to promote the intellectual, social, emotional, and physical growth of children;

Supporting explanation

Candidates understand different family beliefs, traditions, values, and practices across cultures and within society and use their knowledge effectively. They involve families as partners in supporting the school both inside and outside the classroom. Candidates respect parents' choices and goals for their children and communicate effectively with parents about curriculum and children’s progress. They involve families in assessing and planning for individual children, including children with disabilities, developmental delays, or special abilities.

Source document for collaboration with families

*National Standards for Parent/Family Programs, National PTA, 1998*
5d. Collaboration with colleagues and the community—Candidates foster relationships with school colleagues and agencies in the larger community to support students' learning and well-being.

Supporting explanation

Candidates understand schools as organizations within the larger community context and the operations of relevant aspects of the systems in which they work. They also understand how factors in the elementary students' environments outside of school may influence the students' cognitive, emotional, social, and physical well-being and, consequently, their lives and learning. Candidates participate in collegial activities designed to make the entire school a productive learning environment and develop effective collaborations with specialists.

Source document for collaboration with colleagues and the community

Part II: Institutional Responsibilities

A. INTRODUCTION

This Part of Program Standards for Elementary Teacher Preparation describes information that institutions are expected to submit for program review under NCATE accreditation. The focus is on assessment evidence that demonstrates elementary teacher candidate proficiencies, accompanied by appropriate contextual information that will assist ACEI/NCATE program reviewers. This “performance-based” approach contrasts with an overview statement and matrix format displaying descriptions of course offerings and experiences that have previously served as the primary evidence for NCATE program reviews.

It is the responsibility of program faculty to make the case that candidates completing elementary teacher preparation programs are meeting the standards. Faculty in every institution conduct extensive assessment activities and, through external sources, have access to additional information about the performances of their candidates. As they respond to the material for program review described in this Part of the Program Standards, each teacher preparation institution and all faculty involved in elementary teacher education should make full use of evaluative information that is readily available about candidate—and former candidate—proficiencies. Faculty may find it useful to re-evaluate the relevance and adequacy of all this assessment information. They should build on the institution’s own assessments, already in place, and in ways that are suited to the institution’s mission and overall program goals. There are many alternatives through which faculty can provide experiences that will enable candidates to learn and practice the content expressed in the standards. Similarly, there are multiple ways to build the monitoring of candidate progress into the elementary teacher preparation program.

Program quality judgments will be based on evidence that the program’s candidates, as a group, demonstrate proficiency in the standards. Both components of courses or experiences offered by the institution, and characteristics of the assessment and evaluation system, can advance the preparation of teacher candidates. They are essential “inputs” or processes created by institutions so that candidates have opportunities to learn and practice the content and skills of the standards. However, the emphasis in performance-based program review is on evidence demonstrating that candidates know elementary school subjects and can teach them effectively to elementary students.

The program review submission for elementary teacher preparation programs must include a statement of context for the program (see section B.1) together with information demonstrating candidate knowledge and skills relating to the Program Standards for Elementary Teacher Preparation (see section B.2). A reviewers’ report will be prepared that includes findings, analyses, and conclusions as follows:
• Description of findings about the institution’s background, policies and practices as they bear on the elementary teacher preparation program,

• Analysis of the institution’s summaries of evidence about candidate outcomes in relation to elementary teaching standards, including evidence of candidate effects on student learning, and description of issues arising from the evidence,

• Using the foregoing findings and analyses, evaluation of program quality,

• Identification of areas of concern or weakness, and

• Notation of particular strengths of the elementary preparation program.

The reviewers’ interest is in the quality of the program as evidenced by candidate proficiencies, not the format of the submission. Submissions are expected to have some common elements, but other features may differ from institution to institution, depending on the specific education unit mission, approaches to preparation of elementary teacher candidates, and characteristics of assessment and evaluation activities.

The program standards for elementary teaching preparation in Part I, together with the performance-based evidence submissions in Part II, represent a significant change from previous elementary guidelines. For that reason, they are to be used by all institutions applying for initial review, and also for all accredited institutions’ next continuing review. The details of the review process may differ from state to state, however, depending on the provisions of any applicable NCATE State Partnership agreement.

B. INSTITUTIONAL SUBMISSION

The institutional submission includes both a context statement and a summary description of evidence indicating that candidates have developed proficiencies in standards for elementary teacher candidates.

B.1 Context Statement

Institutional Program Review Submission for Elementary Teacher Preparation:
Eighteen months prior to an expected Board of Examiners visit for initial unit accreditation, or twelve months prior to a continuing visit, each institution offering an elementary teacher preparation program will submit a summary description of the context in which the program is conducted. This statement, ranging from 20 to 30 pages, will contain any information that institutional representatives believe

* All program submissions are due at NCATE on either February 1 or September 15. “Eighteen months” means the February or September date nearest to eighteen months, or three semesters, before the scheduled BOE visit. “Twelve months” means the submission is due on the February or September date closest to one year, or two semesters, before the BOE visit.
Each institution has unique attributes that influence the elementary teacher preparation program. It is important that these attributes be considered when performance materials relating to the *Program Standards for Elementary Teacher Preparation* are judged. The context statement should be concisely written as a summary of key points, not an extended, nuanced, cross-referenced paper with numerous attachments. Among the contents that might be expected in the context statement are the following:

- **Basic factual information** on the program such as grades or ages covered, number of candidates enrolled and completing the program each year, and the degree level;

- **Relevant policies and practices** affecting the institution’s elementary teacher preparation, including the relationship of the framework for the elementary teacher program with the conceptual framework used for unit accreditation;

- The unit’s **own evaluation of its elementary program strengths, candidate proficiencies, and overall performance** in relation to its mission and goals and in the context of the *Program Standards for Elementary Teacher Preparation*;

- **Quality assurance processes** used for elementary teacher preparation, the continuing efforts to assure credibility—accuracy, consistency, fairness, and avoidance of bias—of the assessment and evaluation system, and the manner in which results of assessments are used to evaluate and improve programs and teaching; and

- **Any unique state requirements** for K-6 students that may impinge on implementation of the NCATE *Program Standards for Elementary teacher Preparation* or on performance of elementary teacher candidates, with an explanation of how the unit accommodates differences between NCATE and state standards.

As an integral part of the context statement, the institution should **provide up to 10 pages explaining the strengths and qualities of the elementary teacher preparation program**, including courses and experiences the institution offers candidates. This information should explain how the candidates are provided opportunities to learn and practice the knowledge and skills contained in standards for elementary teacher candidates and describe the basis for faculty judgment that candidates are prepared to fulfill beginning teaching responsibilities. It is not to be provided in the form of a matrix and syllabi, as NCATE has requested previously. Instead, the institution should provide its explanation in narrative form, **making its strongest, reasoned case for the institution’s actions** on two issues:
• Opportunities provided so that candidates can learn and practice the content of standards for elementary teacher candidates as they complete the program—for example, making a reasoned case might include a description of the major emphases of the program in relation to the Program Standards, a discussion of how the courses and field experiences are aligned to reinforce each other, a statement on how a capstone clinical experience creates an environment for candidates to observe student learning as a result of their own efforts, or a discussion of linkages the unit makes with arts and sciences faculty to align instruction in subject content courses with standards for new teachers.

• How faculty have confidence in their judgments that candidates have mastered the institution’s expectations for program completers—for example, a reasoned case might be developed around features of the institution’s assessment system, the particular qualifications and experiences of the faculty as judges of teaching, or the nature of the state teacher induction program and success of the unit’s elementary candidates in that program.

B.2 Performance-based evidence

Institutional Program Review Submission for Elementary Teacher Preparation: Eighteen months prior to an expected Board of Examiners visit for initial unit accreditation, or twelve months prior to a continuing visit, each institution offering an elementary teacher preparation program will submit performance material, not exceeding 140 pages including attachments, that summarizes the knowledge and skills proficiencies of elementary teacher candidates as a group. This information constitutes the primary evidence upon which a judgment of national program recognition will be made.

The performance material must be comprehensive in its breadth, yet concise and deep in its contents. The intent is to inform reviewers about candidate proficiencies in relation to the standards included in Part I of Program Standards for Elementary Teacher Preparation. Even though the upper limit of this material is set at 140 pages, it may be possible to convey the necessary information in 50 to 75 pages. This would be possible, especially, if an institution regularly synthesizes data from its monitoring of candidate progress and puts the results into forms useful for discussions about how the program can be strengthened.

Sound evidence usually exhibits several qualitative characteristics. It:

• Results from planned, purposeful, and continuing evaluation of candidate proficiencies, drawing on diverse sources;

* See the explanation of “eighteen months” and “twelve months” provided for the footnote on page 36.
Monitoring of candidate performance is embedded in the elementary preparation program and conducted on a continuing basis. This monitoring is planned in response to faculty decisions about the points in the elementary preparation program best suited to gathering candidate performance information, consistent with the institution’s own context and mission.

All information about candidates’ proficiencies, from all sources, is drawn on by the unit for continuous evaluation of candidate progress and program success. Excerpts, summaries and samples from this array of information are provided for use by NCATE in its program quality reviews. Institutions will usually begin to plan their assessment system around activities that are the direct responsibility of the teacher preparation unit. Examples of assessments that might be used or created within the program include end-of-course evaluations but also tasks used for instructional purposes such as projects, journals, observations by faculty, comments by cooperating teachers, samples of student work, and other information that would commonly be available for faculty use in determining the adequacy of the candidate’s accomplishments in a course.

The monitoring information from the elementary teacher preparation program can be complemented by evaluations originating from external sources that supply information on candidate proficiencies. Examples from outside the unit are candidate performance evaluations during induction years and follow-up studies; performance on state licensure exams that assess candidates’ knowledge of their subject content and of pedagogy, and especially ones constructed to evaluate classroom teaching and effects on student learning; and academic subject knowledge end-of-course examinations, essays, or other demonstrations of achievement.

- **Represents the scope of the standards for elementary teacher preparation;**

  Candidate performance evidence is congruent with the knowledge and skill standards in Part I, or equivalent ones the program sets for elementary teacher candidates.

  Institutions determine the best way to demonstrate that all aspects of the standards are covered, but avoid treating each individual statement from the Part I standards and supporting explanations in a fractionated or serial fashion. Instead, faculty think through how all their existing assessment information can be marshaled, and what additional information is needed, to demonstrate candidate proficiency across the standards.

- **Measures the different “attributes” of standards in appropriate and multiple ways;**
The standards for elementary teacher candidates have different attributes, each of which should be measured in appropriate ways. The four attributes are:

- Knowledge that candidates should possess about subject content, pedagogy, child development and learning, motivation, instruction, assessment and the qualities of a professional;
- Abilities to apply that knowledge effectively in the classroom and other professional teaching situations, including collaboration with colleagues;
- Dispositions usually associated with candidates who go on to successful teaching careers; and
- Candidates’ ability to have positive effects on student learning.

One conclusion about the current state-of-the-art in teacher assessment is that no single test or measurement of teacher candidates is sufficient by itself to represent these different attributes and the full scope of the standards. Multiple measures provide wide opportunities for candidates to demonstrate their accomplishments in relation to the standards. The Committee anticipates that institutions will draw on the extensive range of available assessment forms, including multiple choice (which may be useful to gauge proficiencies in standards calling for candidate knowledge) and also observations, reflections, teaching demonstrations, analytic work, student work samples, and other forms of evaluative information demonstrating proficiency in teaching.

- Results from rigorous and systematic efforts by the institution to set performance levels and judge accomplishments of its candidates;

Faculty establish written and shared explanations of what is valued in a candidate’s response to an assessment—the qualities by which levels of performance can be differentiated—that serve as anchors for judgments about the degree of candidate success. The terms “rubrics” and “criteria” are frequently used in assessment to designate these explanations for levels of performance. These may be stated in generic terms or may be specific to particular assessment tasks. They may define acceptable levels of performance for the institution and one or more levels below (such as borderline, or unacceptable) and above (such as exemplary), or they may be in the form of criteria defining the institution’s expectations for success. The rubrics or criteria are “public,” that is shared with candidates and across the faculty. Faculty teach, advise, and prepare candidates for success in meeting critical external performance expectations, as expressed, for example, in state licensure test pass scores (when they are challenging) and in statements defining acceptable proficiency levels for NCATE/specialty organization “benchmarks.”
The institution judges individual candidate proficiencies, and also summarizes and analyzes the proportions of new teacher candidates who reach levels expressed in the rubrics or criteria. These results are used both for advisement of individual candidates, and also for strengthening of the courses and experiences offered by the institution to prepare elementary teacher candidates. The summary of results from the faculty judgments in applying the rubrics or criteria are used for the NCATE submission. Examples of candidate work are attached to the institutional submission where that is a useful way to assist reviewers’ understanding of the levels of proficiency reached by candidates.

- **Provides information that is credible—accurate, consistent, fair and avoiding bias:**

  The institution gathers information on the accuracy (or validity) and consistency (or reliability) of its assessments. Accuracy is an expectation that the assessment information measures what is important for the decision to be made and that it represents the performances, competencies, and dispositions that are intended (that is, included in standards for elementary teacher candidates). Consistency is an expectation that successive samples of performances from the same candidate are reasonably related. Assessment systems must also be fair, avoiding bias and providing equitable treatment. These are matters that require professional judgment and are often determined through peer review, evaluations by external experts, or formal validation studies.

- **Makes use of appropriate sampling and summarizing procedures.**

  In preparing the elementary program submission, the institution samples and summarizes information about candidate proficiencies.

  Sampling refers both to representing the domain of the standards and representing the full range of the program’s candidates. The candidate sample might be taken from the cohort of teacher candidates completing the program in a specific academic year and previous completers so that information about performance of candidates from their entire preparation experience and into employment can be available for demonstration of candidate proficiency. Of course, anonymity of individual candidates and the students of those candidates must be protected.

  Candidate proficiency results are summarized through averages, spread of scores, and distributions of rubric scores. Summary results are requested because the NCATE interest is in making decisions about program quality, rather than decisions about individual candidates. These summaries are made meaningful through illustrations such as samples of exam questions, examples of written responses, and analytic materials intended to inform
reviewers of the proficiencies that candidates achieve in relation to the standards.

Of course, institutions that have sound evidence systems use the data to advise individual candidates and to strengthen teaching, courses, experiences, and programs.

These qualities of assessment evidence are not, themselves, the requirement for submission. The submission is developed to describe the results of the assessment evidence.

As a reference for faculty, the Drafting Committee has created an Appendix to this paper that contains additional detail, examples, and qualitative descriptions of assessments in teacher preparation. The topics addressed in the Appendix include the Committee’s perceptions of student learning and performance-based program review in the current education reform era, and the evolution of a performance orientation to NCATE accreditation. In addition, each of the six topics on sound evidence, noted above, is elaborated.

C. THE PHASE-IN PERIOD FOR PERFORMANCE-BASED EVIDENCE

During the initial years when the new performance-based approach for NCATE elementary teacher preparation program review is in place, there may be widely varying capability across institutions to produce and use candidate proficiency information. As state licensing requirements become more performance-based, which appears to be the trend, there will be growing pressures on institutions to prepare candidates for success in meeting new proficiency requirements. Over a few years, then, institutions can be expected to develop and routinely employ evaluations of candidate performance in teacher preparation.

In the meantime, NCATE is developing a transition plan for implementation of NCATE 2000, its new performance-based accreditation for teacher preparation units. That transition plan, for which the full text is available on the NCATE web site at www.ncate.org, sets a schedule for all units to follow in development and implementation of their assessment systems. Faculty from institutions applying for program review of elementary teacher preparation should assume the same implementation timelines as those announced for the unit transition plan. In brief, by the Fall of 2001 and Spring 2002 there should be, at a minimum:

- a plan for an assessment system with timelines and details about components and management, collaboratively developed by the professional community, and
- a summary of performance data already available (such as results from state licensure tests or other sources) that can demonstrate candidate proficiencies in relation to standards.
By the Fall of 2004 and Spring of 2005, the assessment system should be implemented, evaluated and refined. The web site provides descriptions for the intervening years and additional details.

Appendix: Perceptions of Performance-Based Program Review and Assessment Evidence

A. THE COMMITTEE’S PERCEPTIONS

This Appendix to the Program Standards for Elementary Teacher Preparation has been prepared as an encouragement for faculty and program heads in elementary teaching preparation programs to develop their own strong performance evidence systems. Such systems provide information that can serve to judge the proficiencies of candidates and improve the institution’s own performance. A sampling and summary of that information can also provide necessary information for NCATE’s performance-based program review.

In these introductory pages of the Appendix, the Drafting Committee makes a statement about the significance of student learning in preparation of elementary teachers, and the challenge of developing and implementing a performance-based program review as part of the NCATE accreditation process. The second part of the Appendix is structured around the qualities of sound assessment systems listed in Part II, and provides additional, and in some cases more technical, detail.

A.1 Student learning and performance-based program review

Student learning is the goal. The process for quality review of teacher preparation programs should focus clearly on preparation of new elementary teacher candidates who help students learn. The previous practice, basing program review decisions on course offerings and experiences of candidates, is remote from elementary student learning, and only indirectly—although instrumentally--related to what teachers of elementary students need to know and be able to do to foster student learning.

The overall approach for performance-based program review adopted by the Committee follows the same strategy that underlies work of the National Board for Professional Teaching Standards in certifying accomplished teachers, efforts of the Interstate New Teacher Assessment and Support Consortium in developing models for teacher licensure, and the current K-12 reforms in most states—that is, set standards and measure performance in relation to those standards. Programs will be judged by their success in
producing new elementary teacher candidates who can demonstrate that they know their subject and can teach so that students learn.

One might posit an “ideal” measurement system for a performance-based NCATE program review: find candidate results on commonly used evaluations that provide measures of subject knowledge and teaching accomplishment expected of new elementary teacher candidates. Such a system would undergird consistent decisions about program quality and permit fair comparisons across institutions. It would reflect consensus among professionals about the levels of proficiencies that should be demonstrated by candidates on these commonly administered and multi-dimensional evaluations. Of course, no such “ideal” has been realized. In a nation of 50 sovereign states and 1300 colleges, departments and schools of education, the level of congruence implied by this description may never be achieved and, perhaps may not even be desirable.

What do we have instead of an “ideal?” Current teacher licensure assessments examine only part of the knowledge and skills that new teachers should acquire. State licensure tests (1) assess basic skills most frequently, (2) often examine content knowledge, and (3) sometimes measure pedagogical knowledge. The mix of components in licensure testing varies from state to state. Moreover, even when common tests are adopted, states set their own “pass” scores. There are some pilot projects that attempt to demonstrate teaching proficiencies of prospective teachers as part of the licensing or induction system, but most states have not even considered such a dimension among their licensing requirements. Only a few states and institutions have attempted to gather evidence that teacher candidates have positive effects on student learning. In summary, current testing for state licensure is a critical element in state accountability practices, one in which candidates must succeed if they are to enter teaching careers. These tests can provide necessary information about candidate knowledge, but they are not sufficient, alone, to inform about proficiencies across all the standards set for candidates—knowledge, teaching, dispositions, and ability to have positive effects on student learning.

The Committee is optimistic that higher quality teacher candidate assessments and at least some greater comparability across these evaluation instruments will be achieved over the next five to ten years. Many states are already grappling with this issue and concluding that performance-based licensure is the way to ensure that new teachers are competent. But a particularly compelling reason for the Committee’s optimism in this regard is found in the large advances in measurement of teaching competencies that have occurred over the past decade. These are partly due to investments in private sector testing but are most visible in the combined developmental efforts of the State of Connecticut, the National Board for Professional Teaching Standards and the Interstate New Teacher Assessment and Support Consortium. Another development over this same period is found in the State of Oregon, which asks that teacher candidates demonstrate “student progress in learning” as one of five standards for an initial teaching license. For many years Western Oregon University has been developing assessment technology to assess student learning during teacher preparation.
How, then, will decisions be made in the NCATE performance-based program review while state licensing requirements continue to evolve? In short, decisions will be made through comparisons: information on candidate proficiencies from an elementary preparation program will be compared with exemplars of such proficiencies identified through professional judgment. As the Drafting Committee sees it, NCATE and the specialty organizations will identify and evaluate numerous examples of assessment exercises, each with explicit descriptions indicating the level of proficiency that is appropriate to expect of candidates completing their program. These examples, which the Committee calls “benchmarks,” will be available on the NCATE and specialty organization web sites, both alerting faculty to the expectations for program review, and guiding individuals who conduct those reviews. The Committee anticipates that institutions will gather candidate proficiency information from a variety of sources: the teacher preparation courses and field experiences, including samples of student work in classes where candidates teach; and also from external origins such as arts and sciences courses, state licensure exams and employer evaluations. Institutions will establish rubrics or criteria by which to judge candidates, then provide sampled and summarized results for the NCATE program review. Program reviewers will make holistic comparisons between the overall results from the institution and the proficiency “benchmark” levels.

Every part of accreditation makes use of professional judgment, including the current program review of courses and experiences. Web site display of the benchmark examples will permit a forum for debate about professional judgments on what should be expected of new teacher candidates. By organizing this debate in search of a professional consensus, NCATE will be able to determine both what performances are “good enough” in relation to the elementary standards and how professional colleagues will know they are good enough.

A.2 Evolution of performance concepts in NCATE

States are adopting subject content standards stating what students in grades K-12 should know and be able to do. States are also creating examination systems and establishing levels of achievement that are expected for graduation. It is not unreasonable that a similar re-examination might be necessary in teacher preparation programs that have as their goal the provision of competent teachers for every child’s classroom.

Many faculty members in institutions that meet the 1995 NCATE unit accreditation standards will find this Appendix material on assessments and monitoring of candidate performance familiar. NCATE’s standard II.C, on assessing the progress of candidates, includes accompanying indicators that state:

The progress of candidates at different stages of programs is monitored through authentic performance-based assessments using systematic procedures and timelines.
Assessment of a candidate’s progress is based on multiple data sources that include grade point average (GPA), observations, the use of various instructional strategies and technologies, faculty recommendations, demonstrated competence in academic and professional work (e.g. portfolios, performance assessments, and research and concept papers), and recommendations from the appropriate professionals in schools.

NCATE’s 1995 standard II.D on ensuring the competence of candidates extends the performance concept with the following indicators:

The unit establishes and publishes a set of criteria/outcomes for exit from each professional education program.

A candidate’s mastery of a program’s stated exit criteria or outcomes is assessed through the use of multiple sources of data such as a culminating experience, portfolios, interviews, videotaped and observed performance in schools, standardized tests, and course grades.

The Program Standards for Elementary Teacher Preparation are an application and extension of the 1995 NCATE expectations for unit monitoring and assessments. Moreover, they are an integral part of the new NCATE 2000 performance-based standards for teacher education units. Under the performance-based program review, NCATE uses results from elementary teacher candidate assessments as evidence to evaluate an institution’s elementary teacher preparation program. Assessments employed in preparation of elementary teacher candidates should provide opportunities for candidates to demonstrate what they know and can do.

Some faculty members may not be familiar with the 1995 NCATE standards or the coming NCATE 2000 unit standards. They may find that both the elementary standards and the forthcoming NCATE 2000 unit standards will encourage them to consider how well-focused their elementary preparation activities are in a performance-based context. They may even consider the possibility of making significant revisions in their instructional programs, or in the way they make use of assessments and evaluations.

Performance-based program review answers the question: “Is the institution preparing elementary teacher candidates with appropriate knowledge, teaching strategies, and dispositions to teach elementary students so those students learn and achieve standards?” Shifting NCATE’s program review to a performance-base does not lessen the importance of what institutions do to prepare candidates—to the contrary. It is not responsible to hold candidates accountable for mastery of knowledge and skills in the Program Standards that they have had no opportunities to learn and practice. Of course, opportunities to learn must be in place for both candidates and their students. Successful programs offer candidates occasions to examine relationships between the routines and activities they organize for their students and the kinds of intellectual development and learning these routines foster. Members of the Drafting Committee for the Program Standards recognize (1) that teacher candidates are required to make many on-the-spot
judgments about what their students are actually learning and about what that implies for the teacher's next decisions, and (2) that student work is often unpredictable and classroom activities can be complicated. Preparing candidates to make on-the-spot judgments, to deal with unpredictable situations, and to teach content not merely for exposure, but for understanding and conceptual meaning—as many K-12 student content standards imply—are enormous challenges to any faculty. These challenges will continue to influence every decision about course structure, course content, field experiences, and advisement provided by the institution.

B. A SOUND SYSTEM FOR PERFORMANCE EVIDENCE

This section of the Appendix is constructed to assist faculty as they contemplate the implications of performance-based program review in their own institution. It begins with a statement of principles for performance-based assessment systems from the NCATE Specialty Areas Studies Board (SASB). That statement reads as follows:

Principles for Performance-Based Assessment Systems in Professional Education Programs

Assessing what professional educator candidates know and can do is critical to implementing the performance-based standards of the National Council for Accreditation of Teacher Education (NCATE) and its affiliated national professional specialty organizations. Given the complexities of teaching and other educational professions; the range of knowledge, skills, and dispositions to be assessed; the multiple purposes for which assessment results are used; and the stakes associated with the outcomes, assessment in professional education programs and units needs to include multiple measures implemented on a systematic and ongoing basis as part of a comprehensive system. This document outlines principles set forth by the NCATE Specialty Areas Studies Board for performance-based assessment systems at the program level.

Although assessment systems will vary across programs and units, they generally should:
   (a) address the knowledge, skills, and dispositions to be acquired by professional educator candidates as set forth in program goals;
   (b) be consistent with the standards of relevant national and state accrediting/approval bodies;
   (c) have multiple means for measuring candidate performance and impact; and
   (d) provide on-going, systematic information useful for decision-making.

It is particularly critical that assessment systems provide credible results that are collected and used in a fair, valid manner consistent with their intended purpose(s).

An appropriate assessment system for a program or unit has the following characteristics:

1. The system is driven by a conceptual framework and program values that espouse assessment as a vehicle for both individual and program self-evaluation and improvement. Assessment is planned and implemented by key stakeholders in a manner consistent with the method of inquiry in the discipline and is considered a means to an end rather than an end in itself.

2. The system includes components that work together in a synergistic manner to address the knowledge, skills, and dispositions of candidates across program goals, objectives and curriculum consistent with the performance-based standards of the respective national professional specialty. Assessment is a goal-oriented process linked to program purposes/goals and national standards.
3. Multiple measures are planned and administered on a systematic, ongoing basis throughout the program beginning with the admissions process. The system includes quantitative and qualitative measures useful for formative and summative assessment. One or more measures designed to yield evidence of positive candidate impact on students are included in the system.

4. The system includes one or more measures that have been created, reviewed, and/or scored by specialty professionals external to the program. Such professionals include those with relevant specialized expertise whose primary responsibility is not to the program/unit, such as field-based master teachers, clinical teachers, intern supervisors, and/or supervisors/employers of program candidates/graduates.

5. The system is clearly delineated. Measures and associated criteria or rubrics (including minimal proficiency levels), as well as policies and practices for obtaining and using results, are described in program documents in a manner that candidates and other stakeholders can understand. Candidates are made aware of program standards and assessment requirements to which they will be held and are provided with models and/or examples of performance and the instruction and support needed to attain such levels.

6. The assessment methods and corresponding criteria included in the system are sufficiently comprehensive and rigorous to make important decisions about the proficiencies of candidates and to safeguard those they may potentially serve. Critical decision-making points are delineated in the system. Decisions that are made reflect the application of relevant criteria and use of results in a manner that discriminates acceptable versus unacceptable performance.

7. The system includes policies and procedures for the gathering, use, storage, and reporting of individual results. Such policies address the rights of individuals (e.g., those afforded candidates by the Family Educational Rights and Privacy Act; confidentiality/anonymity of survey responses). Individual candidate results are reported in a clear manner that acknowledges the source(s) and limitations of the data, individual strengths, and areas of needed or potential improvement.

8. The system includes a structure and procedures for sampling, analyzing, summarizing, and reporting aggregated results. Data are gathered on an ongoing basis and are summarized in a manner that reflects pass rates, the range of performances, and/or the "typical" or "average" performance (e.g., mean, median, or modal performance) as appropriate to the types of measures. Summaries of results are provided to key program stakeholders in a clear manner that acknowledges the source(s) and limitations of the data, data collection and reporting time frame, program strengths, and areas of needed or potential improvement.

9. The program and its assessment system foster the use of results for individual candidate and program improvement. Assessment results are regularly reviewed in relation to program goals and objectives as well as to relevant state and national standards and stimulate changes designed to optimize success.

10. The system has a mechanism and procedures for evaluating and improving itself and its component assessment methods. Evidence of the reliability and validity of the system and its component measures is gathered and used to make decisions about their ongoing use and/or revision. Evidence should address the ability of the system to comprehensively assess performance in a credible manner that is valid, fair, and unbiased.

In the remainder of this Appendix, the Drafting Committee has provided an elaboration of the six qualities of sound evidence listed in the Part II requirements for institutional submission. These are consistent with the Specialty Areas Studies Board principles, but represent those aspects of assessment systems of special concern to the Committee. To restate them, and to note their relationship with the SASB principles, the Committee
describes sound evidence that is derived from assessment systems exhibiting several qualitative characteristics. The evidence:

- Results from planned, purposeful, and continuing evaluation of candidate proficiencies, drawing on diverse sources (SASB principle 1);
- Represents the scope of the standards for elementary teacher preparation (SASB principle 2 and the first part of principle 6);
- Measures the different “attributes” of standards in appropriate and multiple ways (SASB principle 3);
- Results from rigorous and systematic efforts by the institution to set performance levels and judge accomplishments of its candidates (SASB principle 5 and the last part of principle 6);
- Provides information that is credible—consistent and accurate for its intended use (SASB principle 10 and also the privacy rights portion of principle 7);
- Makes use of appropriate sampling and summarizing procedures (SASB principle 8).

The Committee has not prepared these notes as a how-to-do-it manual. The intent, rather, is to disclose to readers the understandings of Committee members about what the current assessment state-of-the-art makes it possible to achieve in responsible assessments of elementary teacher candidate proficiencies.

B.1 Results from planned, purposeful, and continuing evaluation of candidate proficiencies, drawing on diverse sources

Sound assessment systems are integrated with learning experiences throughout the teacher candidates’ development and are not merely a series of unrelated "off-the-shelf" measures. They are embedded in the elementary preparation program and conducted on a continuing basis. Candidate monitoring is planned in response to faculty decisions about the points in the elementary preparation program best suited to gathering candidate performance information, consistent with the institution’s own context and mission. Typically such information is gathered at candidate entry, in coursework, in connection with field experiences associated with teaching methods courses, prior to the start of practice teaching and at completion of the program. The Drafting Committee is primarily concerned that institutions prepare elementary teacher candidates to have a positive and meaningful effect on student learning. It discourages testing or use of performance measures that are administered merely to supply information for NCATE program review.

Institutions will usually begin their assessment planning around activities within the education unit. Examples of types of education unit assessments include end-of-course
evaluations; tasks used for instructional purposes such as projects, journals, observations by faculty, comments by cooperating teachers, samples of student work from the candidate’s teaching; and other information that would commonly be available for faculty use in determining the adequacy of the candidate’s accomplishments in a course. Monitoring information from the elementary teacher preparation program can be complemented by candidate performance data originating from external sources. Examples are candidate performance evaluations during induction years and follow-up studies; performance on state licensure exams that assess candidates’ knowledge of their subject content and of pedagogy, especially ones constructed to evaluate classroom teaching and effects on student learning; and academic subject knowledge end-of-course examinations, essays, projects, or other demonstrations of achievement.

Together, all information about candidates’ proficiencies, from all sources, can be drawn on by the unit for continuous evaluation of candidate progress and program success. Excerpts, summaries and samples from this array of information can be provided for use by NCATE in its program quality reviews.

B.2 Represents the scope of the standards for elementary teacher preparation;

In sound assessment systems, candidate performance evidence is congruent with the knowledge and skill standards in Part I, or equivalent ones the program sets for elementary teacher candidates.

Institutions determine the best way to demonstrate that all aspects of the standards are covered, but avoid treating each individual statement in the Part I standards and supporting explanations in an individual, serial, and fractionated way. Instead, faculty think through how all their existing assessment information can be marshaled, and what additional information they should gather, to demonstrate candidate proficiency across the standards.

Too often in citing the results of tests, both educators and the lay public report results—number scores or the proportion of test takers who “passed”—absent any reference to the content and appropriateness of the test instrument itself. It is better professional practice to align tests with instruction and to be explicit about situations where there is lack of fit. Test takers should not be held accountable for performance on assessments for which their instructional experiences have failed to prepare them. The usefulness and value of information derived from tests are the key determinants in decisions to use or exclude them from an institution’s performance measurement system. That usefulness and value depend, in turn, on the relationship of the tests to the instructional goals and anticipated candidate learning.

B.3 Measures the different “attributes” of standards in appropriate and multiple ways

The standards for elementary teacher candidates have different attributes, each of which
should be measured in appropriate ways. The attributes are:

- Knowledge that candidates should possess about subject content, pedagogy, child development and learning, motivation, instruction, assessment and the qualities of a professional;

- Ability to apply that knowledge effectively in the classroom and other professional teaching situations, including collaboration with colleagues;
  - Dispositions usually associated with candidates who go on to successful teaching careers; and

- Candidates’ ability to have positive effects on student learning.

Sound evidence systems construct assessment exercises that appropriately demonstrate skills described in the standards. However, one conclusion about the current state-of-the-art in teacher assessment is that no single test or measurement of teacher candidates is sufficient by itself to sample that range of skills. Multiple measures provide wide opportunities for candidates to demonstrate their accomplishments in relation to the standards. Through multiple measurements, institutions are able to combine the characteristic of “face validity” found in performance assessments with the strong psychometric properties of more traditional evaluation instruments.

Sometimes the workhorses of testing, multiple choice tests, are most appropriate. They are particularly appropriate when content knowledge and understanding, or pedagogical knowledge, are under investigation. These tests, built on decades of psychometric development, are efficient and highly reliable. Moreover, they have evolved in recent years to include vignettes with follow-up questions, and sometimes written responses of varying length, permitting more sophisticated analyses of knowledge and analytic ability.

Still, multiple-choice tests are not appropriate to measurement of other skills, such as candidate classroom instruction and other teaching abilities. The state of Connecticut, the National Board for Professional Teaching Standards, and the Interstate New Teacher Assessment and Support Consortium have been leaders in development of assessments of teaching. The methodology they have pioneered, frequently described as “teaching portfolios,” includes creation of evidence of positive effects on student learning. In documenting the *act of teaching* the portfolios contrast with measuring *knowledge about* teaching. The methodology can be adapted for use in field experiences and clinical teaching of elementary teacher candidates. Some states and a few institutions are making such adaptations. In outline, a teacher candidate portfolio would ask the candidate to do tasks similar to the following:

- Describe the students in the class, along with the school and community, to establish a context for the teaching.
• Identify three or four particular students with different learning needs for follow-up in greater detail, and describe the specific abilities and needs of these students.

• Plan a unit or set of lessons around a specific concept to move the students in the class beyond their current understanding. Describe the expectations for student learning and the subject content that the lessons are to teach. (This reveals the depth of subject content understanding of a particular topic on the part of the candidate.) Summarize the instructional approach and say, specifically, what students will be asked to do.

• Teach the unit and provide videotaped clips of sufficient length to capture different situations (e.g., lecture to the class, class discussion, small group with candidate interactions) including candidate interactions with the identified students.

• Show samples of student work for the class, and for the identified students, and analyze that work.

• Evaluate the student learning for the class with appropriate instruments and analyze the responses for the identified students specifically.

• Reflect on the experience, especially with regard to those aspects of the teaching and assessment that worked as expected, those that did not, and what candidate actions might be taken at various points to improve student learning.

Western Oregon University has developed a methodology for “teacher work sampling” containing several steps similar to the “tasks” in this list. However, Western places more emphasis on identifying learning outcomes to be accomplished in the sample of teacher work, aligning instruction and assessment so that all students will be monitored, and on the relationship of pre and post instructional measures. While the INTASC, Board and Western Oregon methodologies serve as examples of comprehensive assessments of teaching, adaptable for capstone evaluations of teacher candidate proficiencies, institutions have many opportunities throughout the course of the elementary preparation program to gather and synthesize information on candidate performances.

The remainder of section B.3 provides additional comments about each of the four attributes of the standards, excerpts examples of each attribute from the standards and supporting explanations of Part I, and lists illustrative types of assessments that might be used to examine proficiencies for each attribute. Note, however, that the types of assessments are frequently repeated across the illustrations for different attributes. For example, lesson plans, videotapes, and vignettes are included several times. Note, also, that high quality assessments will frequently provide information about candidate knowledge and skills in relation to several standards, as the “portfolio” outlined above suggests. Even less complex assessments, such as vignette exercises in a methods course, can have this cross-cutting quality. For example, a vignette might ask for essay responses
to a described situation involving a concept in mathematics, presented in a way that is consistent with the development of children in a third grade classroom in which students represent widely divergent previous knowledge, and where the focus is on appropriateness of both the instruction and the assessment used to evaluate student progress. This multi-dimensional quality of assessments helps to underscore the interconnectedness of teaching—curriculum with development with instruction with assessment.

3.a Teacher candidate knowledge

Effective teaching requires mastery over the subject content that new teacher candidates will impart to their students. “Knowledge” is an area in which measurement tools such as essays, oral examples, multiple-choice tests, and semester projects can be especially useful. It is also an area where standardized tests are available commercially that may be appropriate in circumstances where the content of the tests is aligned with the elementary program instructional experiences.

Part I includes many standards describing what new elementary teacher candidates should know. Note that the language of the Committee is “know and understand,” words used to indicate that knowledge is essential, but to understand implies an ability to analyze, use, build on, or relate that knowledge to other knowledge. Examples are:

- **From standard 1**—Candidates know (and) understand . . . major concepts, principles, theories, and research related to the development of children and young adolescents . . .
- **From standard 2b**—Candidates demonstrate a high level of competence in use of the English language arts . . .
- **From standard 2d**—Candidates know (and) understand . . . major concepts, procedures and reasoning processes of mathematics that define number systems and number sense, geometry, measurement, statistics and probability, and algebra . . .
- **From the supporting explanation of standard 3a**—Candidates understand learning theory, subjects taught in elementary schools (described in sections 2a through 2i of the Program Standards), curriculum development, and student development . . .
- **From standard 4**—Candidates know (and) understand . . . formal and informal assessment strategies to plan, evaluate and strengthen instruction that will promote continuous intellectual, social, emotional, and physical development of each elementary student.

Below is an illustrative and diverse list of types of evidence that can be tapped to demonstrate teacher candidate knowledge. Note in all the examples, however, that
particular assessment tasks frequently provide information about candidate proficiency for more than one standard.

| Lesson plans that demonstrate the teacher candidate understands the material being taught |
| Multiple choice tests that probe for information about concept knowledge and applications |
| Project reports or laboratory reports that demonstrate an understanding of concepts and problem-solving ability |
| Videos or feedback to student work demonstrating that teacher candidates can identify naïve interpretations and help develop more appropriate interpretations |
| Vignettes exhibiting naïve interpretations and lesson plans on which the candidate is requested to provide comments indicating how he/she would then proceed in the lesson |
| Transcripts of performance in appropriate course work (e.g., from courses undertaken in subject specialty) indicating level of accomplishment such as exam scores, projects completed, essays prepared |
| Written essays on the content matter demonstrating abilities to develop a topic, write well, clarify questions |
| Examples of assignments that teacher candidates would prescribe as a consequence of their teaching (and perhaps elementary student work, including teacher feedback) |

3.b Teaching performances

Elementary teachers not only know and understand content but are able to relate it to ideas, information, and knowledge previously learned. They know how to teach using a variety of methods, how to adapt their teaching to the subject being taught, and how to engage diverse students in the subject. Candidates who meet these performance competencies will be able to provide evidence of positive effects on student learning.

Here are some examples of teaching standards from Part I:

- From standard 2b—Candidates... use concepts from reading, language and child development to teach reading, writing, speaking, viewing, listening, and thinking skills. ...
- From the explanation for standard 2i—In their instruction, candidates make connections in their instruction across the disciplines and draw on their knowledge of developmental stages to motive students, build understanding, and encourage application of knowledge, skills, and ideas to lives of elementary students across fields of knowledge and in real world situations.
- From standard 3a—Candidates plan and implement instruction based on knowledge of students, learning theory, subject matter, curricular goals, and community.
• From the explanation for standard 3b—Candidates know how to seek assistance and guidance from specialists and other resources to address elementary students' exceptional learning needs.

• From standard 5b—Candidates are aware of and reflect on their practice in light of research on teaching and resources available for professional learning; they continually evaluate the effects of their professional decisions and actions on students, parents, and other professionals in the learning community.

There are many ways to demonstrate that elementary teacher candidates meet the performance aspects of the standards. In addition to the “portfolio” approach described above, here are some illustrative types of teacher performance measures:

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<th>Elementary student impact</th>
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<td>Evidence of elementary student learning</td>
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<td>Evidence of “surface” and “deep” elementary student learning</td>
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<td>Case studies that candidates are asked to analyze</td>
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<td>Elementary student projects showing evidence of ability to make use of information</td>
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<td>Student essays demonstrating ability to state and elucidate ideas</td>
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<th>Graduates’ success</th>
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<td>State licensure test pass-rates and results on induction year portfolio assessments</td>
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<td>Graduate surveys</td>
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<table>
<thead>
<tr>
<th>Artifacts produced by the teacher candidate</th>
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<tr>
<td>Lesson plans</td>
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<tr>
<td>Teaching aids</td>
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<tr>
<td>Videos</td>
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<tr>
<td>Feedback on student work</td>
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<td>Vignettes</td>
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<td>Case studies</td>
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<td>Assessment materials</td>
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<tr>
<th>Reflective essays on candidate-prepared lessons</th>
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<tr>
<td>Written essays</td>
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<tr>
<td>Reflections on student work emanating from the lessons</td>
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<td>Examples of assessments</td>
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<td>Journal entries</td>
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<td>Interviews</td>
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<tr>
<th>Attestations of teaching accomplishment</th>
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<tr>
<td>By cooperating teachers</td>
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<tr>
<td>By students</td>
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<tr>
<td>By parents</td>
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<td>By principals</td>
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<td>Summative evaluations</td>
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<tr>
<td>Transcripts of course performance</td>
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<td>Multiple choice tests</td>
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<th>Observations</th>
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<tr>
<td>Videotapes of classroom instruction</td>
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Dispositions refer to values and commitments and often make the difference between what elementary teacher candidates understand and how they perform in a classroom. Examples of dispositions that are significant in teacher preparation might include:

A belief that all students can learn, a vision of high and challenging standards, a commitment to personal professional development and to a safe and supportive learning environment, an ability to accept responsibility, an understanding of school operation as an integral part of the larger community, an acceptance of families as partners in the education of their children, and a dedication to bringing ethical principles into decision-making processes.

Such values and commitment are important elements in successful teaching and may frequently be of particular relevance at the unit level rather than for individual preparation programs.

One example of dispositions critical to effective teaching was the focus of a paper prepared for the Committee by Mary Kennedy. In stating the importance of “changing one’s conception of teaching,” Dr. Kennedy claims that:

The unusual nature of teacher learning is such that students entering teacher education already “know” a great deal about their chosen field. Moreover, they will use what they already know to interpret any new skills or new theories they acquire during the formal study of teaching. This fact means that the simple acquisition of new skills or theories is not adequate to alter teaching practices. Therefore, the central task of teacher learning must be to change these conceptions.

(Candidates) need to be persuaded that school subjects consist of more than the facts and rules they themselves learned as children. Teachers conceptions of subject matter as fixed, indisputable, and factual, need to be replaced with conceptions that recognize ambiguous concepts and tentativeness, and that acknowledge that even young children are capable of reasoning about and arguing
about ideas in each school subject. Unless teachers envision subject matter as conceptual, they cannot teach it conceptually. And . . . teacher educators need to address and alter teacher candidates’ strong desire to control student behavior, for the desire to develop management routines that keep students on task and in line is frequently a stumbling block to implementing conceptual approaches to teaching.

As evidence for her expression of dispositions, Kennedy suggested the following indicators:

| Evidence that teacher candidates adopt conceptual goals for teaching school subjects; |
| Evidence that teacher candidates justify their lesson plans and their approaches to teaching according to the concepts they want students to learn, and that these concepts are included in national subject matter standards; |
| Evidence that teacher candidates are aware of teaching practices such as reciprocal teaching, cognitive apprenticeships, and the writing process, which are defined according to what is learned rather than only according to how teachers behave; and |
| Evidence that programs monitor the teaching practices of cooperating teachers. |

It is difficult to identify measures for such indicators, and, indeed, it is challenging to establish measures of proficiency for any dispositions. Over time, however, institutions in which dispositions are explicit and important will find ways to demonstrate that candidates have achieved them. The Committee encourages faculty in elementary preparation programs, and the leadership of the unit, both to state values and commitments toward which completing elementary candidates should be disposed, and to search for appropriate ways that candidates’ achievements in these areas can be exhibited.

There are few explicit references to dispositions in the Part I standards as written by the Committee, largely because of the measurement problems noted above. But here are some:

- From the introduction to Part I—New candidates for elementary teaching must be committed to elementary students and their learning. They must be prepared to act on a belief that all elementary children have potential for learning rigorous content and achieving high standards.
- From the supporting explanation of Standard 1—(Candidates) consider diversity an asset and respond positively to it.
- From the supporting explanation for standard 2e—Candidates are able to use knowledge, skills, and dispositions from social studies to organize and provide integrated instruction in grades K-6 . . .
- From the supporting explanation for standard 2h—Teacher candidates . . recognize the critical importance of physically active life styles for all
students . . . Teacher candidates appreciate the intrinsic values and benefits associated with physical activity.

- *From the supporting explanation for standard 5b*—Candidates respect parents’ choices and goals for their children and communicate effectively with parents about curriculum and children’s progress.

### 3.d Positive Effects on Student Learning

Elementary teacher candidates are expected to gather examples of their elementary students’ work. Those examples can illustrate that candidates’ knowledge and teaching performances result in evidence of positive effects on students' achievement.

The Committee seeks a focus on student learning and it expects that program review submissions will sample and summarize what faculty monitoring has disclosed about learning among students of candidates in the elementary preparation program. It does not expect “representative samples” of work of a candidate’s students. Nor does it expect Part I standards to be interpreted as efforts to hold elementary teacher candidates responsible for specific student gains on state achievement tests. In their field experiences, teacher candidates often are placed in other teachers’ classes for short periods, are given limited control over the choice of curricula, must adapt to the teaching style of the cooperating teacher, and rarely have students for sufficient time to see other than very short term effects.

But student learning, as noted elsewhere, is the goal. It is appropriate to devise standards that direct attention to student learning. It is also appropriate to know whether teacher candidates can find ways to understand the level of accomplishment of their students, to use that knowledge as a basis for design of instruction for a particular objective, to identify and apply suitable measures of effects on student learning as a result, then finally, to reflect on the whole sequence and hypothesize how the instruction might have been more effective.

Here are some examples of Part I standards that call for positive effects on student learning:

- *From standard 2a*—Candidates . . . can create meaningful learning experiences that develop students’ competence in subject matter and skills for various developmental levels.

- *From the supporting explanation for standard 2b*—(Candidates) teach students to read competently . . . . Candidates teach students a variety of strategies to monitor their own reading comprehension . . . . They help students think critically about what they read.

- *From standard 2d*—Candidates . . . foster student understanding and use of patterns, quantities, and spatial relationships that can represent phenomena, solve problems and manage data.

- *From the supporting explanation for standard 3d*—(Candidates) create learning communities in which elementary students assume responsibility for themselves
and one another, participate in decisionmaking, work collaboratively and independently, and engage in purposeful learning activities.

In the box below some illustrative types of evidence to examine positive effects on student learning are listed:

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<tr>
<th>Evidence Type</th>
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<tr>
<td>Student work indicating material was learned and understood by elementary</td>
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<tr>
<td>students</td>
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<tr>
<td>Student work and reflections on how this work relates to the lesson as taught</td>
</tr>
<tr>
<td>Teacher lesson plan based on understandings of the content domain, and teacher</td>
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<tr>
<td>awareness of the common misconceptions that need to be addressed</td>
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<tr>
<td>Feedback on students’ work that illustrates how the student could improve and</td>
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<tr>
<td>advance</td>
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<tr>
<td>Elementary students’ expressions that the activities are personally relevant,</td>
</tr>
<tr>
<td>are connected to previous information learned, are interesting and challenging.</td>
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<tr>
<td>Examples of elementary student work demonstrating skills in integrating</td>
</tr>
<tr>
<td>learning and generalizing</td>
</tr>
<tr>
<td>Student scores on achievement tasks throughout the time the teacher has been</td>
</tr>
<tr>
<td>teaching and indications of how they are used to improve and enhance teaching</td>
</tr>
<tr>
<td>Evidence about the performance of previous teacher candidates (graduates) after</td>
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<tr>
<td>they have taught a few years</td>
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</table>

B.4 Results from rigorous and systematic efforts by the institution to set performance levels and judge accomplishments of its candidates

Institutions that systematically conduct evaluations of candidate proficiencies also determine performance levels by which candidate success can be judged. They address the question: “How good is good enough?” The terms “rubrics” and “criteria” are frequently used to designate levels of performance. Rubrics and criteria are narrative descriptions of what is valued in a candidate’s response to an assessment—the qualities by which levels or elements of performance can be differentiated—and serve as anchors for judgments about the degree of candidate success. They may be stated in generic terms or may be specific to particular assessment tasks. They may define acceptable levels of performance for the institution and one or more levels below (such as borderline, or unacceptable) and above (such as exemplary), or they may be in the form of criteria defining the institution’s conditions or expectations for success. The rubrics or criteria are “public,” shared with candidates and across the faculty.

Institutions with sound assessment evidence systems judge individual candidate proficiencies, and also summarize and analyze the proportions of new teacher candidates who reach levels or conditions expressed in the rubrics or criteria. These results are used both for advisement of individual candidates, and also for strengthening of the courses and experiences offered by the institution to prepare elementary teacher candidates. The
summary of results from the faculty judgments in applying the rubrics or criteria are used for the NCATE submission.

**B.5 Provides information that is credible—accurate, consistent, fair and avoiding bias**

The Committee has specified in Part II that the program and unit needs to demonstrate the “credibility” of their assessment information. That term was intended as less technical than the traditional “valid and reliable” (or accurate and consistent) but was expected to encompass those qualities, along with fairness, and avoiding bias.

Accuracy, or validity, is an expectation that the assessment information measures what is important for the decision to be made and represents the performances, competencies, and dispositions that are intended (that is, included in standards for elementary teacher candidates). Institutions with sound assessment systems gather and make use of defensible evidence that their assessment activities validly portray the proficiencies of their elementary teacher candidates. Linn and Miller (1986) made the following important comment about validity:

> It is widely agreed that validity is the most important consideration in the evaluation of the use of a test. Validity is always a matter of degree. It is not a single all-or-none concept. Rather, the concern is with the degree to which the accumulated evidence supports a particular test use. Many forms of evidence may be relevant in evaluating the validity of a particular test use, and it is not possible to give a simple prescription for the forms or adequacy of the evidence in the abstract. Professional judgment is required to determine the forms of evidence that are most appropriate in a given situation and to judge the adequacy of the support for the intended purpose.

A core concept to the notion of validity is **representativeness**, that is, the degree to which the assessment task models the construct, and the degree to which it samples the universe of the construct. When choosing assessment procedures for whatever purpose—evaluating candidate achievement, determining program or course effectiveness, preparing for NCATE program approval—it is necessary to address the extent to which the assessments “represent” the performances, competencies, and dispositions, such that the process does not lead to:

- Construct under-representation (the assessment does not capture the important aspects of the construct), or
- Construct irrelevance (the assessment measures something other than what was intended by the construct).

Consistency, or reliability, in institutional assessment systems is an expectation that successive samples of performances from the same candidate are reasonably related. Assessment systems must also be fair; for example, they must be based in opportunities to learn provided by the curriculum and those, in turn, must reflect the standards for
teacher candidates. They should avoid bias, providing equitable treatment for all candidates. Making judgments about these matters requires professional expertise and is often determined through peer review, evaluations by external experts, or formal validation studies.

B.6 Makes use of appropriate sampling and summarizing procedures

In preparing the elementary program submission, the institution samples and summarizes information about candidate proficiencies.

Sampling refers both to representing the domain of the standards and representing the full range of the program’s candidates. The candidate sample might be taken from the cohort of teacher candidates completing the program in a specific academic year and previous completers so that information about performance of candidates from their entire preparation experience and into employment can be available for demonstration of candidate proficiency. Of course, anonymity of individual candidates and the students of those candidates must be protected.

Candidate proficiency results can be summarized through averages, spread of scores, and distributions of rubric scores. Summary results are requested because the NCATE interest is in making decisions about program quality, rather than decisions about individual candidates. These summaries are made meaningful through illustrations such as samples of exam questions, examples of written responses, and analytic materials intended to inform reviewers of the proficiencies that candidates achieve in relation to the standards.

In demonstrating candidate proficiencies as the basis for program review, the guide is: ask enough, but not too much. Two key assumptions underlie the discussion of sampling evidence:

- It is reasonable to assume that all institutions will be able to demonstrate excellence. The key issue is whether this excellence is present among all, or most, of its teacher candidates. Merely asking an institution to provide evidence of excellence is insufficient, as there may be pockets of excellence, as opposed to excellence across all, or a sufficient number of, students. Thus, attention needs to be given not only the nature and level of performances desired, but the satisfactory sampling of this excellence.

- Given that the aim of *Program Standards for Elementary Teacher Preparation* is to raise expectations, then considering only teacher candidates within an institution who are at the “cut-score” point of excellence may lead to overemphasis of the minimally qualified candidate at the expense of considering and promoting the very best.

It is not necessary to sample all aspects of the standards. Sampling some of the standards relative to some of the students in a systematic way is advantageous. The amount and
degree of sampling may be related to prior performance by the institution. For example, institutional programs previously designated as “nationally recognized” may require less sampling, whereas those considered “borderline” in previous program reviews may require more sampling.

Whatever sampling methods are used, a series of performance indicators could be constructed to evaluate the quality of the assessments, such as:

- Which content knowledge and skills are intended to be assessed by the performance assessments(s)?

- How adequately do the assessment procedures cover knowledge and performances?

- What evidence is provided to demonstrate that faculty appropriately assess candidate work at levels expressed in the institution’s rubrics for “acceptable” proficiency?

- What is the level/depth of the very best, as well as marginally acceptable, candidate work, with perhaps a sample of other work?


2. A publication that both describes and evaluates this topic is Grading Teachers, Grading Schools: Is Student Achievement a Valid Evaluation Measure? Edited by Jason Millman, Corwin Press, Inc., 1997. Among the examples of teacher and school evaluation in this book is the Oregon “Teacher Work Sample Methodology” as it has been created and nurtured by Western Oregon University.

3. Defining an Ideal Teacher Education Program, Mary M. Kennedy, Michigan State University, April, 1997, pp. 13 and 15.

4. Two specific approaches for evaluating levels of performance—or judging how good is good enough—came to the attention of the Committee in the course of its work. These are “SOLO” and “scoring rubrics.”
These two methods provide some sense of convergence about establishing levels of performance, while each of may be more applicable to particular standards or institutional interests.

a. SOLO taxonomy.

The “Structure of the Observed Learning Outcomes” model, or SOLO, describes four consistent sequences, or levels. These levels are ordered in terms of various characteristics: from the concrete to the abstract; an increasing number of organizing dimensions; increasing consistency; and the use of organizing or relating principles. “SOLO” was developed to assess qualitative outcomes, which may be applied to evaluate learning quality in a wide variety of school and college situations, in most subject areas. The four levels are:

- **Unistructural**: One aspect of a task is picked up or understood serially, and there is no relationship between facts or ideas.

- **Multistructural**: Two or more aspects of a task are picked up or understood serially, but are not interrelated.

- **Relational**: Several aspects are integrated so that the whole has a coherent structure and meaning.

- **Extended abstract**: The coherent whole is generalized to a higher level of abstraction.

Here is an example of a performance standard based on the SOLO taxonomy: *It is expected that elementary teacher candidates know the content material to be taught, and can teach that content to elementary students in an integrated and coherent way.*


b. Scoring rubrics

A second approach to setting levels of performance that can define how good is good enough is through scoring rubrics for each assessment in relation to the associated standard(s). The example here is based on work of the National Board for Professional Teaching Standards.

Elementary teacher candidates can be classified on, at least, three levels:

- **Accomplished teacher candidates**: Elementary teacher candidates have accurate and deep understanding of the content relevant to each standard as exemplified in their performances as teachers—for example.
  
  The “accomplished” or level 3 performance provides clear, convincing, and consistent evidence that the elementary teacher candidate has knowledge of the content described in each standard, has the proficiencies to apply that knowledge to teaching situations, has enthusiasm and attitudes appropriate to successful teaching, and can have a positive impact on the learning of all his/her students with respect to the content specified in the standard.

- **Satisfactory teacher candidates**: Elementary teacher candidates demonstrate accurate understanding of the content relevant to each standard as exemplified in their performances as teachers—for example.
  
  The “satisfactory” or level 2 performance provides clear evidence that the elementary teacher candidate has knowledge of the content described in each
standard, has the proficiencies to apply that knowledge to teaching situations, has enthusiasm and attitudes appropriate to successful teaching, and can have a positive impact on the learning of all his/her students with respect to the content specified in the standard.

- **Unsatisfactory teacher candidates:** Elementary teacher candidates demonstrate limited and surface understanding of the content relevant to each standard as exemplified in their performances as teachers—for example, The “unsatisfactory” or level 1 performance provides limited or little or no evidence that the elementary teacher candidate has knowledge of content described in each standard, has the proficiencies to apply that knowledge to teaching situations, has enthusiasm or attitudes appropriate to successful teaching, or can have a positive impact on the learning of all his/her students with respect to the content specified in the standard.

An example of a performance standard based on scoring rubrics is: *It is expected that elementary teacher candidates have sufficient knowledge about the content material to be taught to elementary students that they would be classified at Level 2. Satisfactory teacher candidates.*