NCLB: Taking Research to Implementation
Agenda - Teacher Quality

October 25, 2005
Oak Brook, IL
Charles R. Coble
ECS Senior Policy Advisor
What problems are we trying to solve?

- Quality Teachers
- Higher Expectations
- Parental Engagement
- Achievement Gaps
- College Readiness

Under Achievement
Student Achievement: The Differences are Great!

NAEP 4th Grade Reading 2002 – By Race & Ethnicity

<table>
<thead>
<tr>
<th>Race</th>
<th>Prof/Adv</th>
<th>Basic</th>
<th>Below Basic</th>
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</thead>
<tbody>
<tr>
<td>Black</td>
<td>13%</td>
<td>28%</td>
<td>60%</td>
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<tr>
<td>Latino</td>
<td>15%</td>
<td>29%</td>
<td>56%</td>
</tr>
<tr>
<td>Native</td>
<td>22%</td>
<td>29%</td>
<td>49%</td>
</tr>
<tr>
<td>White</td>
<td>41%</td>
<td>35%</td>
<td>25%</td>
</tr>
<tr>
<td>Asian</td>
<td>37%</td>
<td>33%</td>
<td>30%</td>
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</tbody>
</table>
Highly Qualified Teachers: Why?
NAEP 8th Grade Math 2002 – By Race & Ethnicity

Black: 68% Prof/Adv, 60% Basic, 5% Below Basic
Latino: 27% Prof/Adv, 31% Basic, 9% Below Basic
Native: 12% Prof/Adv, 38% Basic, 12% Below Basic
White: 34% Prof/Adv, 43% Basic, 23% Below Basic
Asian: 40% Prof/Adv, 35% Basic, 25% Below Basic
Percent of U.S. Degrees in 2002 Awarded to Foreign Nationals

- Engineering: Bachelor - 7%, Master's - 47%, Doctorate - 56%
- Computer Science: Bachelor - 8%, Master's - 47%, Doctorate - 45%
- Math: Bachelor - 4%, Master's - 37%, Doctorate - 53%
- Biological Science: Bachelor - 2%, Master's - 13%, Doctorate - 25%
What problems are we trying to solve?

- Engaging Lessons
- Diverse Learners
- Alternative Strategies
- Assessment
- Quality Teaching
Teachers Matter!

Math gain scores Texas, grades 3-5

- Home and Family Factors: 49%
- Teacher Qualifications: 40%
- Class Size: 8%
- Other School Factors: 3%
Teachers Matter: Math Gain Scores in Dallas

Average Math Score 3 yrs later in Percentiles

Beginning 3rd Grade Score (Percentile)

Highly Qualified Teachers: Why?

Math and Reading Gain Scores in Boston

Average Student Growth Over One Year (per cent)

Least Effective Teachers
Most Effective Teachers

-0.6% 14.6% 5.6%

0.3%
Highly Qualified Teachers: Why?

Impact of Effective vs. Ineffective Teachers on Low-Performing Students

Source: William Sanders and Joan Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement," 1996
Highly Qualified Teachers: Why?

NC Grade 5: NC End-of-Grade Reading Test
Charlotte-Mecklenburg

Percent Meeting State Standard


Black  White

43 52 54 59 70

94


Black  White
Highly Qualified Teachers: Why?

Aldine, TX: Improving achievement and closing gaps

Passing TAAS math test

African American  Latino  White


97% 96% 92%
Effective teachers can close these gaps!

“By our estimates from Texas schools, having an above average teacher for five years running can completely close the average gap between low-income students and others.”

- John Kain and Eric Hanushek
What problems are we trying to solve?

- Teacher Retention
- Induction & Mentoring
- Working Environment
- Professional Development
- Career Advancement
What are the sources of teachers?

- New Graduates: 6%
- Teachers who remain from previous year: 90%
- Re-entrants: 4%

Teachers who remain from previous year account for 90% of teachers, followed by New Graduates at 6% and Re-entrants at 4%.
Beginning teacher attrition is a serious problem

How does the working environment affect teacher retention?

• A recent study by Richard Ingersoll (2002) found that more teachers left school for dissatisfaction or to get a better job than for retirement or family reasons

• A number of other studies found that factors influencing teacher satisfaction include the following
  – administrative support
  – faculty influence on school decisions
  – realistic teaching loads
  – good relationships with peers
  – opportunities for professional development

Source: Shann, 1998; Williams, 2003; Ingersoll, 2002; Woods & Weasmer, 2002; Moore Johnson & Birkeland, 2003
How does the working environment affect teacher retention?

Teachers in hard-to-staff schools are less satisfied with working conditions than teachers in other NC schools

-- Glennie, Coble, and Allen (2004)
What problems are we trying to solve?

Teacher Preparation

Content Knowledge

Pedagogy
Highly Qualified Teachers: NCLB

• Have full state certification
• Hold a minimum of a bachelor’s degree
• Have demonstrated subject matter competency in each of the academic subjects in which the teacher teaches - if the subject is a core academic subject.
Linda Darling-Hammond and Checker Finn agree on two things:

✓ That smart, caring teachers can help students overcome background problems like poverty and limited English proficiency.

✓ That the sun will likely rise tomorrow!
Teacher Preparation Reduces Attrition of First-Year Teachers

% of teachers leaving after one year

- Practice Teaching: 11.6% (Training), 25.0% (No Training)
- Feedback on Teaching: 13.0% (Training), 25.7% (No Training)
- Observation of Other Classes: 12.8% (Training), 27.3% (No Training)
- Training in Child Psych & Learning Theory: 12.0% (Training), 28.1% (No Training)
- Training in Selection & Use of Materials: 12.6% (Training), 20.7% (No Training)
How do we produce highly qualified teachers?

Recruitment → Preparation → Initial License → Employment & Induction → Continuing License → Retention & Professional Development

Higher Levels of Achievement for All Students
The problems are connected. Are the solutions?

- Teacher Preparation
  - Content Knowledge
  - Pedagogy
- Quality Teachers
- College Readiness
- Achievement Gaps
- Parental Engagement
- Higher Expectations

- Under Achievement

- Quality Teaching
  - Engaging Lessons
  - Diverse Learners
  - Alternative Strategies
  - Induction & Mentoring

- Working Environment
  - Professional Development
  - Career Advancement
  - Assessment
NCLB: ECS Tracks Policy Implementation

Data include state laws, departmental regulations, board rules, directives and practices related to 40 requirements across seven major sections of the NCLB legislation, including the Highly Qualified Teacher provisions.
What is a Highly Qualified Teacher? (as defined by NCLB)

“Highly qualified” means that the teacher:

• Has full state certification
• Holds a minimum of a bachelor’s degree
• Has demonstrated subject matter competency in each of the academic subjects in which the teacher teaches - if the subject is a core academic subject.
What is a core academic subject?

Mathematics
Civics and government
Geography
History
English, reading or language arts
Science
Economics
Arts*

*While the list of core academic subjects in the statute includes the arts, it does not define specifically which arts courses are core academic subjects. States may decide which arts courses will be considered as core academic subjects.
Michigan’s Highly Qualified Teacher Definition

STATE OF MICHIGAN
STATE BOARD OF EDUCATION

THE MICHIGAN DEFINITION
FOR IDENTIFYING HIGHLY QUALIFIED
TEACHERS

In Accordance With Criteria
Provided By The
No Child Left Behind (NCLB)
Act Of 2001

MICHIGAN DEPARTMENT OF EDUCATION

Thomas D. Watkins, Jr.
Superintendent of Public Instruction

Approved April 24, 2003

Note:
1. The first day of school is defined as the first day of school that students report per the
district school calendar.
2. New teachers trained at an approved Michigan teacher preparation institution will meet
the definition of highly qualified because they are required to take and pass the Michigan
Test for Teacher Certification (MTTC) basic skills test and appropriate subject area
examinations.

Highly Qualified Teachers — Elementary Level

A highly qualified teacher at the elementary level who is new to the profession must hold at least a
bachelor’s degree, and full state certification including passage of the Michigan Test for Teacher
Certification (MTTC) basic skills test and the comprehensive elementary examination. New
elementary teachers who are assigned to teach specific content area(s) in grades 6-8 must pass the
appropriate MTTC subject area examination as required by Section 1531 of the Michigan
Revised School Code.

A highly qualified teacher at the elementary level who is not new to the profession and was issued
a Michigan teaching certificate prior to implementation of the MTTC (the MTTC was fully
implemented in 1992), in addition to holding at least a bachelor’s degree and full state
certification, each teacher will need to provide evidence of meeting one of the following options:

- Passage of the MTTC general elementary examination and any subject area examinations
  for which the teacher is endorsed and is, or will be, teaching in grades 6-8. Individuals
  who hold the old K-8 “all subjects” (no longer issued after September 1, 1988)
designation on their elementary teaching certificate may elect to take and pass the
MTTC subject area examination for each subject that he/she is assigned to teach in grades
6-8 if they do not hold a major in the subject, OR
- A graduate degree or coursework that is equivalent to an undergraduate major in any
  subject area directly related to elementary teaching, OR
- Achieve National Board Certification or credentialing in any subject(s) at an appropriate
devotional level(s), OR
- The following high objective uniform state standard of evaluation (HOUSE):
  1. Have at least 3 years of teaching experience at the elementary level and have
     completed, since the issuance of the Provisional teaching certificate, a minimum
     of 18 semester credit hours in a planned standards-based SBLE-approved
     endorsement program or a master’s or higher degree in an area appropriate for
     elementary education, OR
## California’s NCLB Teacher Requirements

### “New” To The Profession
- Hold a California Credential or a California Intern Credential or Certificate issued after July 1, 2002

### “Not new” To The Profession
- Hold a California Credential or a California Intern Credential or Certificate issued before July 1, 2002

<table>
<thead>
<tr>
<th>GRADE SPAN</th>
<th>ELEMENTARY SCHOOL</th>
<th>ELEMENTARY SCHOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIREMENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Bachelor’s degree (Sec. 3.2.1)</td>
<td></td>
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<tr>
<td>2) California Credential or an Intern Credential or Certificate for no more than three years (Sec. 3.2.2)</td>
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<tr>
<td>3) Core academic subject competence must be demonstrated by: (Sec. 3.2.3)</td>
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<tr>
<td>EXAM: Pass a multiple subject examination approved by the California Commission on Teacher Credentialing (CCTC) or</td>
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<tr>
<td>HOUSE: Complete California’s High Objective Uniform State Standard of Evaluation</td>
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<table>
<thead>
<tr>
<th>GRADE SPAN</th>
<th>MIDDLE AND HIGH SCHOOL</th>
<th>MIDDLE AND HIGH SCHOOL</th>
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<tr>
<td>REQUIREMENTS</td>
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<td></td>
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<td>1) Bachelor’s degree (Sec. 3.2.1)</td>
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<tr>
<td>2) California Credential or an Intern Credential or Certificate for no more than three years (Sec. 3.2.2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3) Core academic subject competence (Sec. 3.2.3)</td>
<td></td>
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</tr>
<tr>
<td>EXAM: Pass a subject matter examination in each subject taught approved by the CCTC or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COURSEWORK: In each core area taught complete a:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A) CCTC approved subject matter program, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B) Major, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C) Major equivalent, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D) Graduate degree</td>
<td></td>
<td></td>
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<tr>
<td>or</td>
<td></td>
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<tr>
<td>ADVANCED CERTIFICATION: National Board Certification in the core area or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOUSE: Complete California’s High Objective Uniform State Standard of Evaluation</td>
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Subject-Matter Competency

"In an increasingly complex world, sometimes old questions require new answers."
How can existing teachers demonstrate subject-matter competency?

**ELEMENTARY**
- Subject knowledge and teacher skills State test
- High objective uniform state standard of evaluation (HOUSSE)

**MIDDLE/SECONDARY**
- Subject knowledge State test
- Academic major or coursework equivalent to major
- Graduate degree
- Advanced certification
- High objective uniform state standard of evaluation (HOUSSE)
What is a HOUSSE, anyway?

i. Is set by the State for both grade appropriate academic subject matter knowledge and teaching skills;

ii. Is aligned with challenging State academic content and student academic achievement standards and developed in consultation with core content specialists, teachers, principals, and school administrators;

iii. Provides objective, coherent information about the teacher's attainment of core content knowledge in the academic subjects in which a teacher teaches;

iv. Is applied uniformly to all teachers in the same academic subject and the same grade level throughout the State;

v. Takes into consideration, but not be based primarily on, the time the teacher has been teaching in the academic subject;

vi. Is made available to the public upon request; and

vii. May involve multiple, objective measures of teacher competency.
Yes, but what is it really?
(From the September 2003 guidance)

States should consider the following factors:

• Do the proposed HOUSSE measures provide an “objective” way of determining whether a teacher has adequate subject-matter knowledge?
• Is there a strong and compelling rationale for each part of the HOUSSE procedures?
• Do the procedures take into account, but not primarily rely on, previous teaching experience?
• Does the plan provide solid evidence that the teacher has mastered the subject-matter content of each of the core academic subjects in which he or she is teaching? (Note: Experience and association with content-focused groups or organizations do not necessarily translate into an objective measure of content knowledge.)
• Has the State consulted with core content specialists, teachers, principals, and school administrators?
• Does the State plan to widely distribute its HOUSSE procedures and are they presented in an understandable format to all teachers?
HOUSSE: High Objective Uniform State Standard for Existing Teachers
# Georgia’s HOUSSE

<table>
<thead>
<tr>
<th>Years of Experience In the Content Area</th>
<th>College Level Course Work In the Content Area</th>
<th>School or System-Level Activities or Service Related to the Content Area</th>
<th>State, Regional or National Activities or Service Related to the Content Area</th>
<th>Scholarship In the Content Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Points:</td>
<td>Points:</td>
<td>Points:</td>
<td>Points:</td>
<td>Points:</td>
</tr>
<tr>
<td>10 points for each year of teaching experience in the content area at the appropriate level</td>
<td>5 points for each 3-semester hour content course.</td>
<td>5 points for each year per documented service or activity (5 PLUs = 5 points)</td>
<td>5 points for each year per documented service or activity (5 PLUs = 5 points)</td>
<td>5 points each per professional accomplishment</td>
</tr>
<tr>
<td>5 points for each year of teaching experience in the content area at a different level</td>
<td>50 points for holding a major/degree in the content area</td>
<td>7 year recency of service or activity limit</td>
<td>7 year recency of service or activity limit</td>
<td>30 points for accomplishments noted above</td>
</tr>
<tr>
<td>Maximum: 50 points</td>
<td>Maximum: 70 points (see below)</td>
<td>Maximum: 30 points</td>
<td>Maximum: 30 points</td>
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</tr>
<tr>
<td></td>
<td>#2 points for course work</td>
<td></td>
<td>#2 points for course work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 points for a major/degree</td>
<td>#2 points for course work</td>
<td>#2 points for course work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 points for Master’s degree</td>
<td>7 year recency of service or activity limit</td>
<td>7 year recency of service or activity limit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 points for EdS degree</td>
<td>Maximum: 30 points</td>
<td>Maximum: 30 points</td>
<td>Maximum: 30 points</td>
</tr>
<tr>
<td></td>
<td>10 points for Doctoral degree</td>
<td>#2 points for course work</td>
<td>#2 points for course work</td>
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<table>
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<tr>
<th># Years:</th>
<th># Semester Cr Hours:</th>
<th># Activities:</th>
<th># Activities:</th>
<th>#Accomplishments:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td># Major/Degree</td>
<td># Graduate Degrees:</td>
<td># Graduate Degrees:</td>
<td># Graduate Degrees:</td>
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</table>

<table>
<thead>
<tr>
<th>Total Experience Points:</th>
<th>Total Course/Degree Points:</th>
<th>Total Service/Activity Points:</th>
<th>Total Service/Activity Points:</th>
<th>Total Scholarship Points:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td>#2 points for course work</td>
<td>#2 points for course work</td>
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<td>7 year recency of service or activity limit</td>
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<td></td>
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<td>Maximum: 30 points</td>
<td>Maximum: 30 points</td>
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</table>
On October 6, 2004, the governors of Montana and New Mexico wrote a letter to Secretary seeking his support for rural states. Their issues:

- The majority of schools in Montana cannot meet [the subject matter competency] requirement because teachers in smaller school almost always teacher multiple course, and sometimes multiple grades.
- Developing high-quality professional development that reaches isolated teachers.
NCLB-Teaching Quality Major Issues: Rural School Teachers

Are middle and high school teachers in small rural schools required to be highly qualified for every core academic subject they teach?

Yes. All teachers who teach core academic subjects must be highly qualified in each subject they teach. Of course, small rural districts face special challenges in ensuring that all of their teachers are highly qualified no later than the end of the 2005-2006 school year. These districts and the States in which they are located should examine how the resources provided through Title II, Part A, coupled with those available through local, State, or other Federal programs, can be used to improve and expand professional development opportunities to help ensure that teachers (1) receive high-quality, content-specific professional development and (2) can meet the State’s HOUSSE standard for each subject they teach or pass subject-specific tests.
"The intent of the law is to ensure that each teacher of a core academic subject has sufficient subject matter knowledge and skills to instruct effectively in his or her assigned subjects, regardless of whether the school is configured as an elementary or a middle school. For instance, 8th-grade algebra teachers must have the same requisite skills and knowledge whether they are located in elementary schools or middle schools."

“For the purpose of determining whether a teacher of a core academic subject in grades 6 through 8 must meet the subject-matter competency requirements for elementary or those for middle school teachers, States should examine the degree of rigor and technicality of the subject matter that a teacher will need to know in relation to the State’s content standards and academic achievement standards for the subjects in those grade levels. It is up to the State to make this decision.”
USDOE’s Areas of Potential Concern

• Out-of-field teaching:
  Only 54% of the nation’s secondary teachers were highly qualified during the 1999-2000 school year. (mathematics: 47%, science and social science: 47%)

• Burdensome and bureaucratic certification systems

• Low pass scores on content assessments

• Teaching on waivers (lacking full state certification – particularly in high poverty school districts)
Recommendations

Federal officials should:
• Not allow the nation to retreat on the promises or possibilities of NCLB.
• Recognize the unique political and cultural contexts of states, and accord them the necessary flexibility to accomplish their goals.
• Keep pressure on states, but give them credit for moving forward on NCLB.
Recommendations

Federal officials should:

• Ensure the research and development opportunities NCLB affords are not overshadowed by the law’s management challenges.

• Provide incentives that encourage states to serve as laboratories of research and development, thereby broadening the scope and deepening the impact of NCLB.
Recommendations

Federal officials should:
Push for greater transparency in and comparability among data sets to better inform public debate, and challenge what appear to be limited or questionable public policy pronouncements.
Recommendations

Federal officials should:
• Provide clear, consistent and timely guidance regarding compliance with the highly qualified teachers provisions of NCLB.
• Insist that states provide accurate and accessible data on the qualifications and competence of teachers.
Recommendations

State policymakers should:
Ensure state laws or board policies reflect an expectation that High Objective Uniform State Standards of Evaluation (HOUSSE), combined with the state’s certification requirements, truly guarantee all teachers are knowledgeable in the subjects they teach.
State policymakers should:
Develop data systems that provide a clearer picture of the quality and effectiveness of teacher preparation programs (where teachers are trained, where they are placed, their performance in the classroom and so on).
Federal and state policymakers should:
• See that changes to the law or creation of financial incentives should be targeted to teachers in hard-to-staff schools, and particularly teachers in middle schools.
• Develop state policies that provide teachers – particularly those in hard-to-staff schools – with greater access to high-quality professional development.
Recomendations

Federal and state policymakers should recognize that:
• Specific and targeted programs are required to change the teaching in hard-to-staff schools
• Policies at the state level often do not “trickle down” to these schools
• Need for differentiated and focused intervention
“Looks aren’t everything. It’s what’s inside you that really matters. A biology teacher told me that.”
Charles R. Coble
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