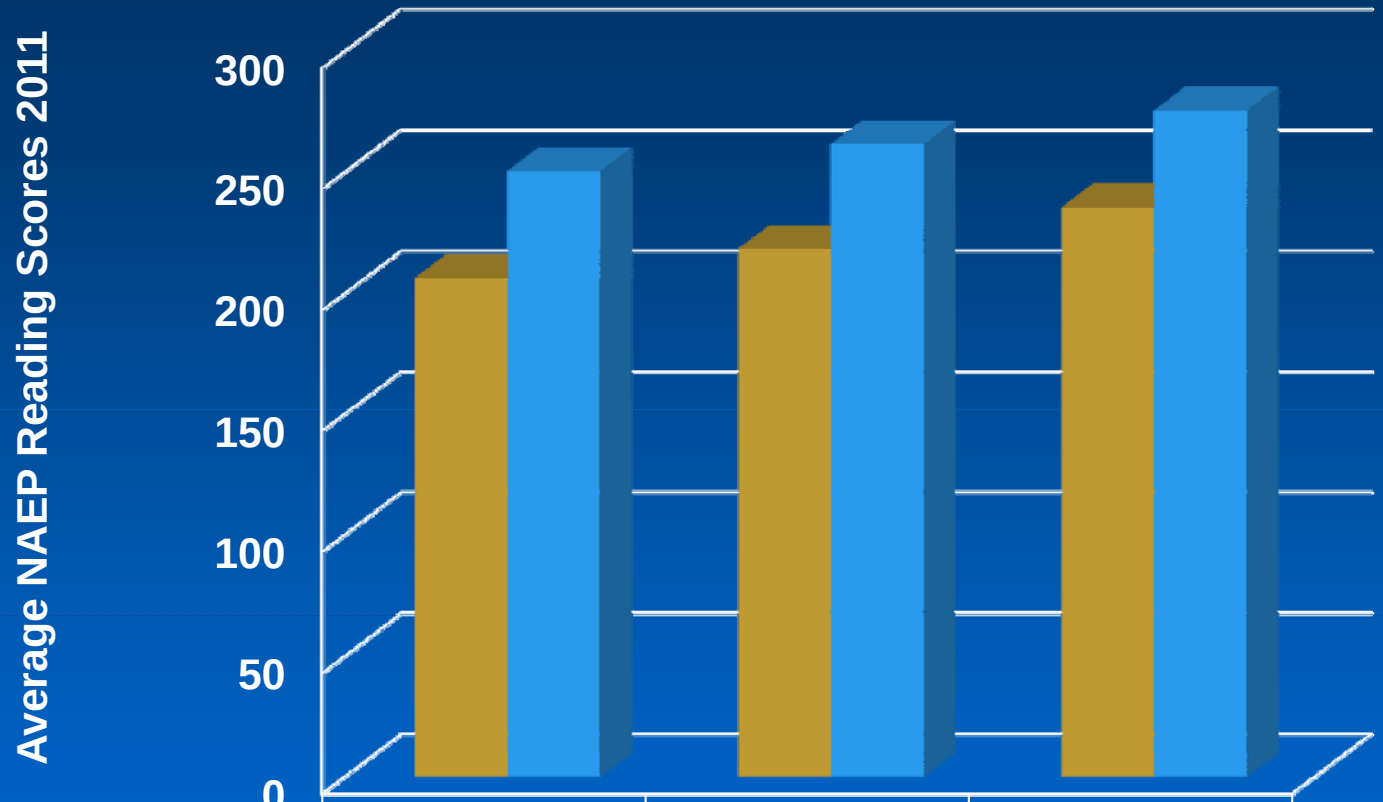
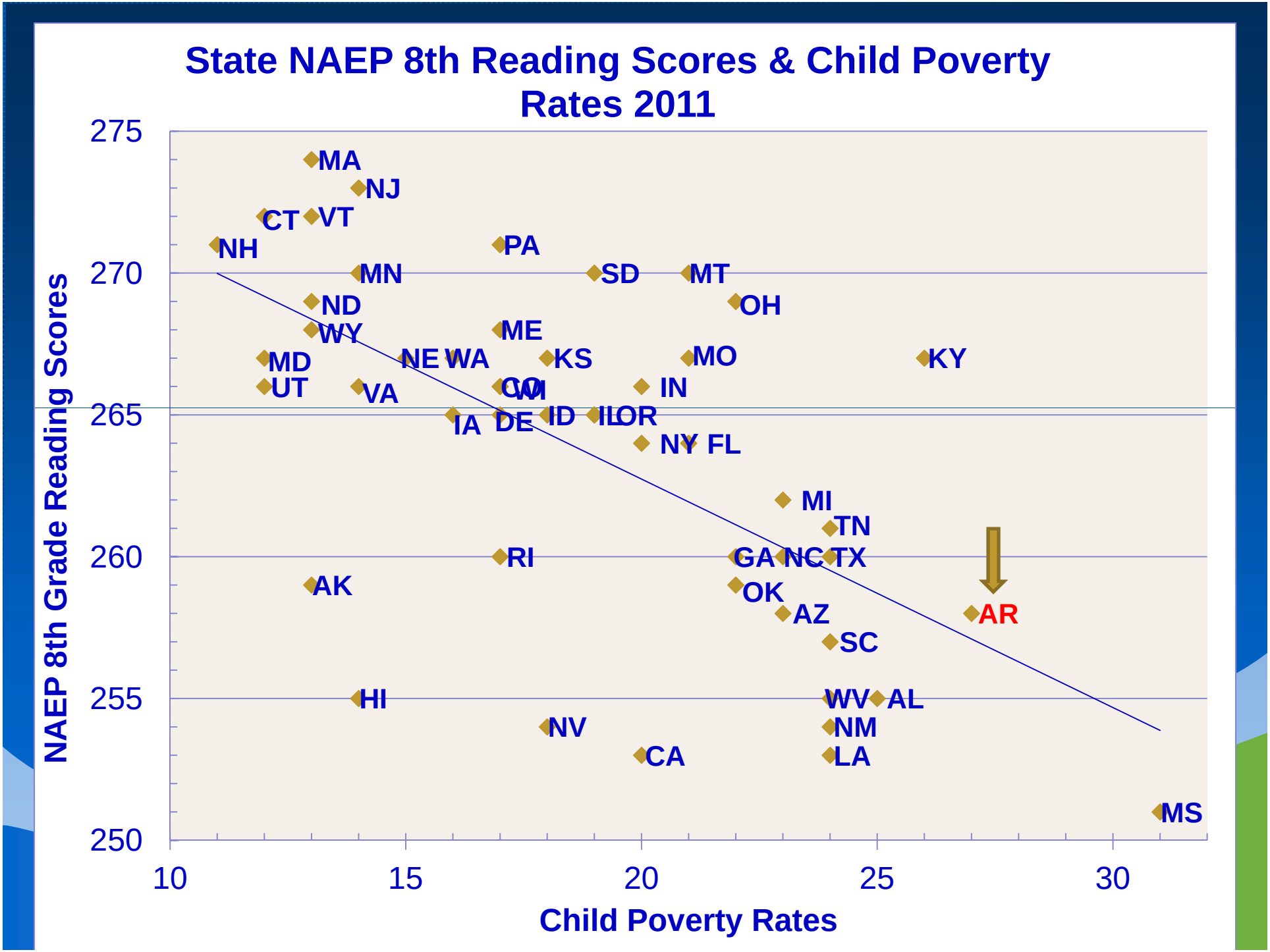
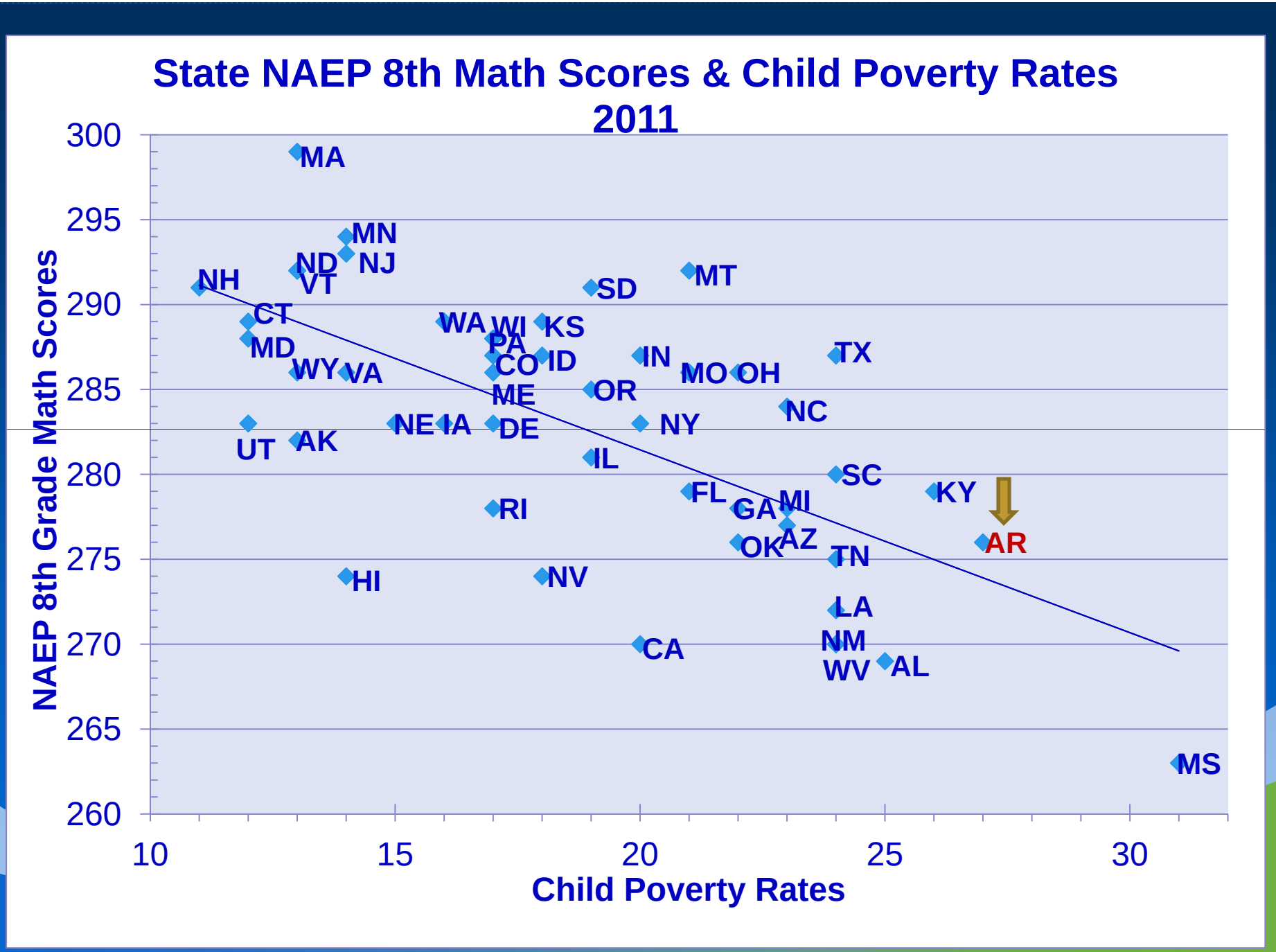
Success in High Poverty Schools: Uncovering the "Secrets" of Student Achievement in Schools with High Concentrations of Poverty

Average NAEP Reading Scores According to NSL, 2011



	Free	Reduced	Full-price
4th Graders	206	218	235
8th Graders	250	261	275


State NAEP 8th Reading Scores & Child Poverty Rates 2011
NAEP 8th Grade Reading Scores
Child Poverty Rates
275
270
265
260
255
250
10
15
20
25
30
MA
NJ
CT
VT
NH
PA
MN
SD
MT
ND
OH
WY
ME
MD
NE
WA
KS
MO
KY
UT
VA
IN
IA
DE
ID
IL
OR
NY
FL
MI
TN
RI
GA
NC
TX
AK
OK
AZ
AR
SC
HI
WV
AL
NV
NM
CA
LA
MS


State NAEP 8th Math Scores & Child Poverty Rates
2011
NAEP 8th Grade Math Scores
Child Poverty Rates
300
295
290
285
280
275
270
265
260
10
15
20
25
30
MA
MN
ND
NJ
VT
NH
CT
MD
WY
VA
UT
AK
SD
MT
WA
WI
KS
PA
CO
ID
IN
MO
OH
TX
ME
OR
NC
NE
IA
DE
NY
IL
SC
KY
FL
GA
MI
AZ
AR
RI
OK
TN
HI
NV
LA
NM
WV
AL
CA
MS

Review Methodology

The purpose of this report is to identify educational interventions that rigorous research has shown to be consistently effective in contributing to student achievement gains across different methodologies, student demographics, school settings, and community characteristics.

This report relied on evidence from primary experimental and quasi-experimental studies, meta-analyses, and narrative reviews based on rigorous selection criteria. Research from proprietary education programs and partisan organizations and "think tanks" was not used.

An effort was made in this report to obtain objective evidence based On rigorous study methodologies, rather than on finding advocacy positions and secondary reviews that may reflect ideological and political opinions. Narrative reviews were included if they followed the basic selection criteria developed by the What Works Clearinghouse of the Institute of Education Sciences (*http://ies.ed.gov/*).

Findings: Teachers

Taken together, evidence indicates that it is the combined effects of the interventions discussed in this presentation that results in maximum effectiveness on student achievement, rather than the discrete impact of any one of the influences. These interventions are interrelated and act in concert to bring about student achievement gains.

Research studies have demonstrated that teachers influence student learning more than any other single factor within the school context, and the effects of teaching on student achievement are cumulative.

To effectively diversify instruction to address the variety of abilities and needs of students, teachers must have a thorough mastery of the subjects they teach, and the skills to present differentiated instruction.

Mastery includes not only the particular courses taught, but also foundational and extended knowledge and skills taught in prerequisite courses and courses that follow.

Findings: Teachers

Research has found that the differences in student achievement can be 9 months or more - essentially a full school year of learning - between the most effective and least effective teachers.

The National Mathematics Advisory Panel found that differences in teachers account for 12% to 14% of total variability in students' mathematics achievement gains during an elementary school year.

This Panel notes that when teachers are ranked according to their ability to produce student achievement gains, there is a 10 percentile point difference across the course of a school year between achievement gains of students of top-quartile teachers versus teachers in the bottom quartile.

Based on a national sample of math teachers, the Panel concluded that teachers, especially below high school, do not know enough math to teach it. A college major, or even a concentration, in math is not required to teach math in virtually all states.

Findings: Professional Development

Yet, studies have revealed that minority students and students living in poverty frequently have been taught by unlicensed, out-of-field, and inexperienced teachers, who often did not have a record of strong academic performance in their college years.

According to researchers, three essential factors leading to effective teaching are hiring practices, effective leadership, and job-embedded professional development (PD) by instructional facilitators.

Research shows that the most effective PD consists of job-embedded instruction and modeling from academic coaches, practice teaching, observational feedback from peers and coaches, and regular evaluation based on clearly stated expectations.

Effective PD involves a plan of accumulative, incremental learning over a span of years that is individually tailored by the teacher and evaluator based on a variety of observations and measures (or artifacts).

According to research, single-session workshops, with no follow-up or opportunity to practice skills, are not effective in terms of raising student achievement.

Findings: Leadership

As studies reveal more about how teachers learn, many researchers and practitioners have begun to place greater emphasis on collaborative learning in professional learning communities (PLCs).

PLCs provide an ideal forum for teachers to learn course content and teaching skills from one another (PD), to examine and interpret test data as the basis for differentiated and coordinated instruction across teachers, courses, and grade levels, and to evaluate and adjust lesson plans and curriculum.

According to research by the Wallace Foundation, the principal is in the best position to assume the role of curriculum leader, and to ensure that the PLC keeps the focus on effective teaching and student achievement.

At the same time, research shows that effective leaders delegate clear responsibilities of leadership to teachers based on their expertise and interests, recognizing that no one person has the knowledge, experience, and capacity to be in charge of all phases of educating students.

Findings: Leadership

A well-designed Wallace Foundation study found that leadership is the second most important school-based factor in children's academic achievement and noted that there were few, if any, cases of troubled schools turning around without effective leaders.

After a decade of research, The Wallace Foundation has calculated that principals account for about a quarter of the student achievement in a school.

They also found that the impact of principals, as measured by the value-added scores, was nearly twice as large in high-poverty schools as in low-poverty schools.

The principal becomes the catalyst for developing a culture of high academic expectations through shared leadership devoted to mutual respect and support between all children and adults. Everyone involved is held accountable to high standards. However, the level of expectations is tempered with consideration for individual challenges and deficits.

Findings: RTI & Tutoring

A particularly valuable function of PLCs in schools with high concentrations of poverty is the use of Response to Intervention (RTI).

RTI provides a systematic set of steps to identify problems, and their severity, in early grades so progressively intensifying intervention can remedy them in order for normal learning to occur. This type of intervention is critical for students entering school with many skill deficits as a result of poverty.

A critical element of the RTI process is having a professional (social worker, nurse) to facilitate, coordinate, and evaluate the collection of various services needed by individual children. This professional should be knowledgeable about the ecological systems perspective on the effects of poverty, and the various services available in the community to address complicated problems stemming from bio-psychosocial forces.

Studies show that one-to-one tutoring by regular teachers or trained tutors is considerably more effective than volunteers or teaching assistants. Tutoring is enhanced by an emphasis on phonics.

Findings: After-School Programs

The effects of one-to-one tutoring last into the upper elementary grades only if classroom interventions continue beyond this initial period.

Small group tutorials can be effective, but are not as effective as one-to-one instruction by teachers or trained tutors.

The Harvard Family Research Project concluded that evidence suggests that participation in after-school programs can positively affect the academic, social-emotional, and physical well-being of young people, including long-term educational attainment and occupational success.

However, both the direction and magnitude of associated effects of after-school programs depends on the quality of staff and programs.

Studies show that approximately 40% of the workforce in after-school programs involves part-time staff members who plan to stay less than 3 years. Very few have training pertinent to after-school programs.

Findings: Summer School

The RAND Corporation narrative review of research for the U. S. Dept. of Education concluded that many types of summer learning programs have the potential to reduce summer learning losses, but their effectiveness relies heavily on quality of staff and programs.

Based on their extensive review, RAND researchers identified key components of quality summer learning programs: (a) small class size (≤ 20), (b) differentiated instruction, (c) high-quality instruction, (d) aligned school year and summer curriculum, (e) engaging and rigorous academics, (f) maximized participation and attendance, (g) sufficient duration, (h) involved parents, and (i) evaluation of effectiveness.

John Hopkins University researchers published a comprehensive narrative review of studies that compare the effectiveness of different types of pre-school and early childhood programs. Their findings are presented on the following slide.

Table 1 Evidence of Effectiveness of Early Childhood Programs

Strong Evidence of Effectiveness

Six early childhood programs produced strong evidence of effectiveness, with a sample size weighted effect of at least + 0.20 in at least two studies, at least one of which was randomized.

• Curiosity Corner • Direct Instruction	• ELLM • Interactive Book Reading	• Let's Begin with the Letter People • Ready Set Leap

Moderate Evidence of Effectiveness

Five Programs had at least one randomized or two match students and a weighted mean effect size of at least + 0.20

• Breakthrough to Literacy • Bright Beginnings	• DLM Express Plus Open Court • Pre-K Mathematics Plus DLM Software	• Project Approach

Limited Evidence of Effectiveness: Strong Evidence of Modest Effects

Three programs met the criteria for moderate evidence of effectiveness with weighted mean effect sizes between + 0.10 and + 0.19 on one or more outcome clusters.

• Doors to Discovery	• Language Focused Curriculum	• Literacy Express

Limited Evidence of Effectiveness: Weak Evidence with Notable Effects

Three programs had a weighted mean effect size of at least + 0.20, but did not qualify for moderate evidence of effectiveness due to insufficient numbers of students in studies.

• EMERGE	• PATHS	• Sound Foundation

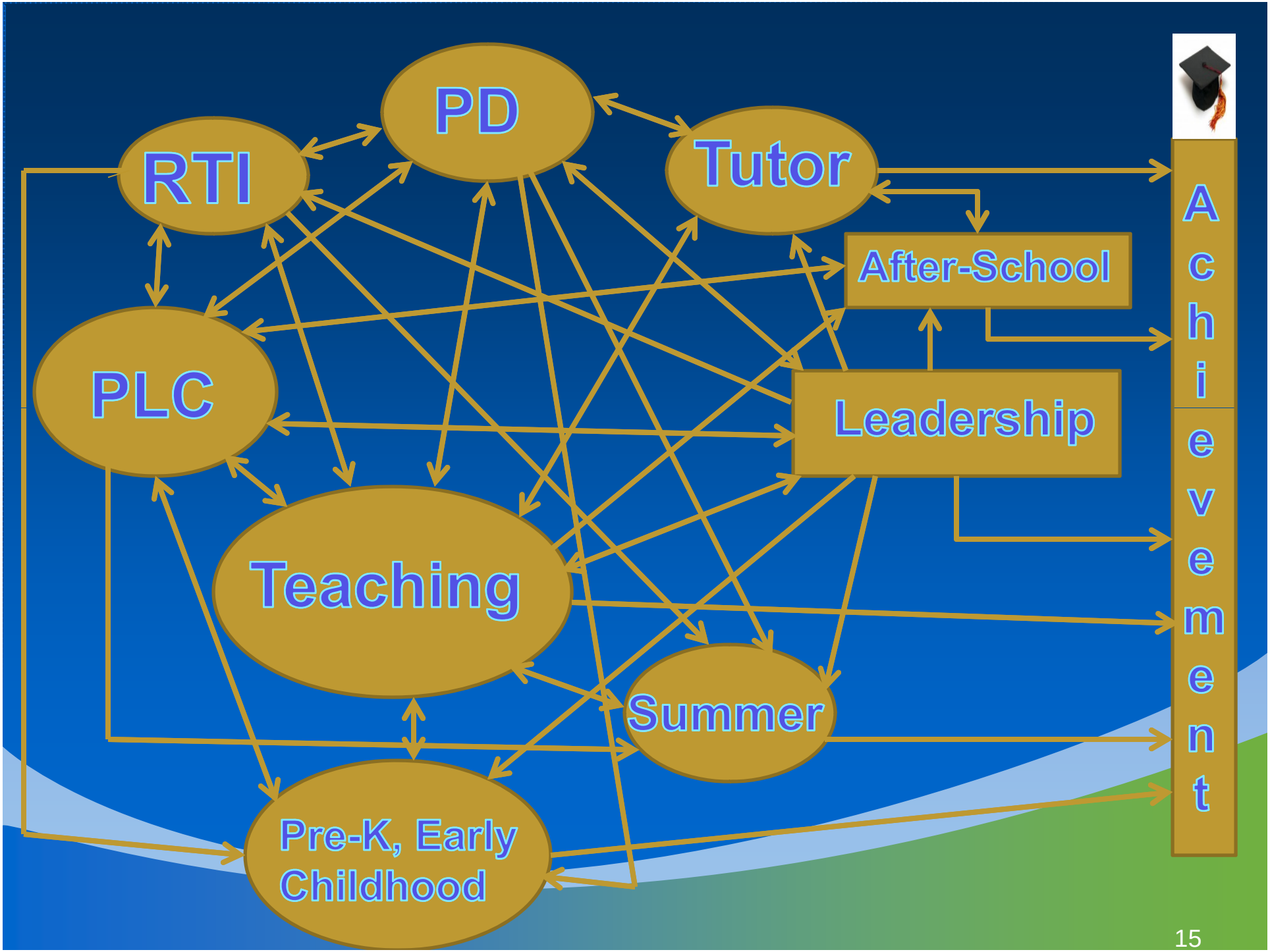
Insufficient Evidence of Effectiveness

• BELL • Creative Curriculum • DARCEE	• Dialogic Reading • Ladders to Literacy • Montessori	• Project Construct • REDI	• Tools of the Mind • Waterford

No Qualifying Studies

• High Scope • Reggio Emilia	• Scholastic Preschool • Abecedarian	• Building Blocks • Early Authors Program

Note: Effect sizes of + 0.20 are considered high for an intervention effect (or impact).


PD
RTI
Tutor
After-School
PLC
Leadership
Teaching
Summer
Pre-K, Early Childhood
Achievement