Closing Middle Grade Achievement Gaps: Indicators and Enablers

Findings from a Decade of Work
NYC DOE Closing Achievement Gap Series
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Finding 1

To realize the results we desire, interventions in middle grades schools must be comprehensive

To date most middle grades reforms have not been comprehensive

They tend to focus on one or two key areas

- Higher standards/Greater academic press
- More coherent curricula
- More effective instructional programs
- Enhanced or increased professional development and teacher support
- Better or more intensive use of instructional time
- Improved teaching and learning environments
- Increased student supports/family involvement

All of These Reforms Are:

- Essential
- Necessary
- Difficult to implement

They are not, however, sufficient in high-poverty environments

- Small to modest gains result when decent implementation is achieved and sustained

- Disappointment over lack of major gains leads to a new, non-comprehensive strategy

- Achievement gaps continue for many students; gaps become chasms

- 50% or more of eventual dropouts fall off the graduation track in the middle grades

Why?

Finding 2

We have underestimated the intensity and scale of the educational challenge in high-poverty middle schools

The onset of adolescence combined with concentrated, inter-generational poverty creates its own set of challenges

- Developmental and cognitive challenges all middle schools face -- magnified by the freedoms of urban environments and large numbers of students with below-grade level academic skills
- Neighborhood challenges -- gangs and criminal enterprises need adolescent males
- Family responsibilities brought on by poverty increase with adolescence

These challenges are often met with an inadequate educational response, makes matters worse

- Intense concentration of large numbers of students with emotional, social, and academic needs in a sub-set of middle schools
- Insufficient number of skilled and stable adults in these schools and neighborhoods committed to middle grades students' development
- Often poor physical facilities

As a result middle grades students begin to disengage from school in large numbers and at a rapidly accelerating rate

- Some stop attending school regularly.
- Some start acting out and being disruptive in class.
- Some just stop trying and start failing their courses.

Impact of Adolescence and Poverty on Attendance in Baltimore

High-Poverty Neighborhood	Percent of Elementary Students (Grade1-5) Missing 20+ Days	Percent of Middle Grades Students Missing 20+ Days
Clifton-Berea	15%	46%
Greenmount	15%	50%
Madison	21%	65%
Midway	6%	55%
Park Heights	17%	57%

Source: BNIA

When students disengage from school in the middle grades, they do not achieve significantly
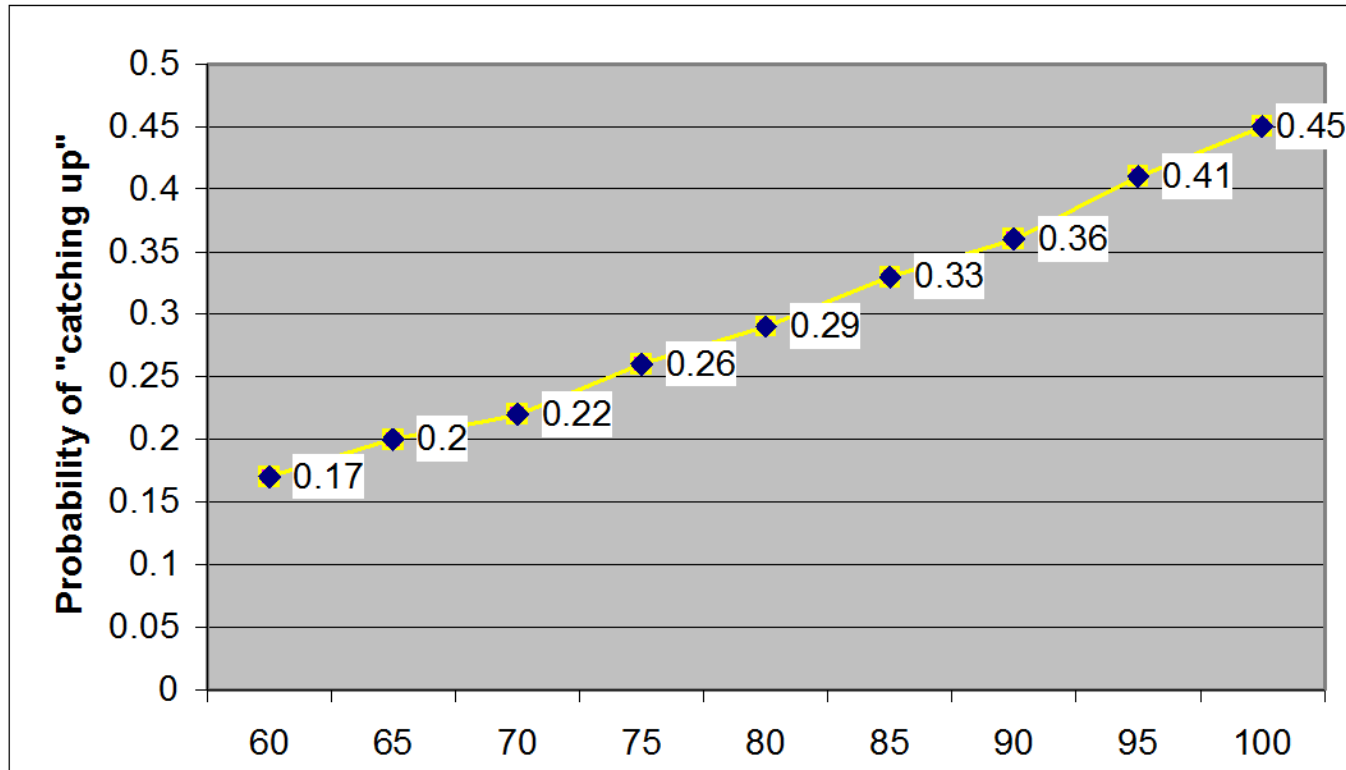
- Excellent instructional programs and good teachers have limited impact when students do not attend school regularly, behave, engage, and try

Effective instruction PLUS student engagement = achievement gains

- In three representative high-poverty middle schools, 77% of the students who attended 95% of the time, got excellent behavior grades, had above average effort levels during 6th, 7th and 8th grades, and strong teachers for 2 of the 3 years made large achievement gains in math

- Less then 20% of students in the sample of three high-poverty middle schools, however, had high attendance, excellent behavior, and high effort levels throughout grades 6-8, and strong teachers in two of the three years

Impact of Attendance
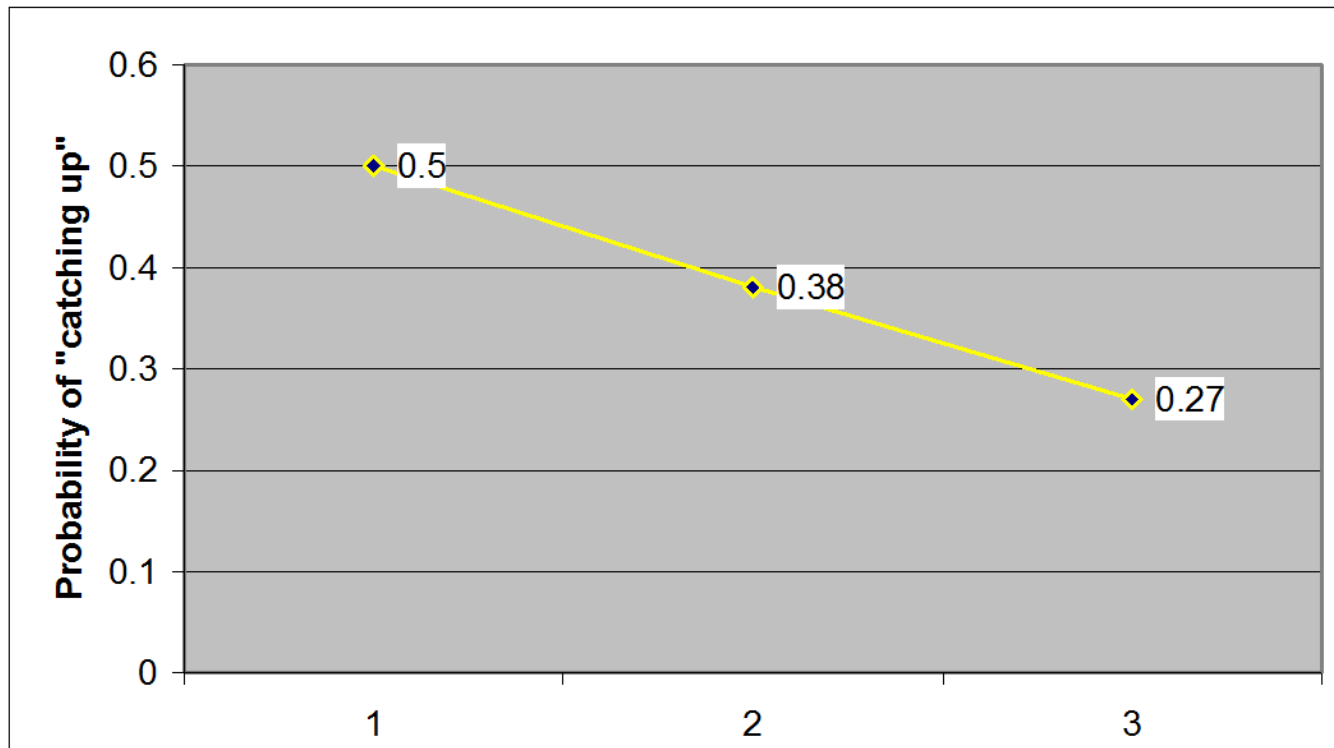

Figure 3 *(Impact of Attendance)*

Percentage of total school days attended
(CEMS student; Non-Asian Student; from Cohort 1; with effort of 6; behavior of 2; percentage of effective math teachers of 50)

Impact of Behavior
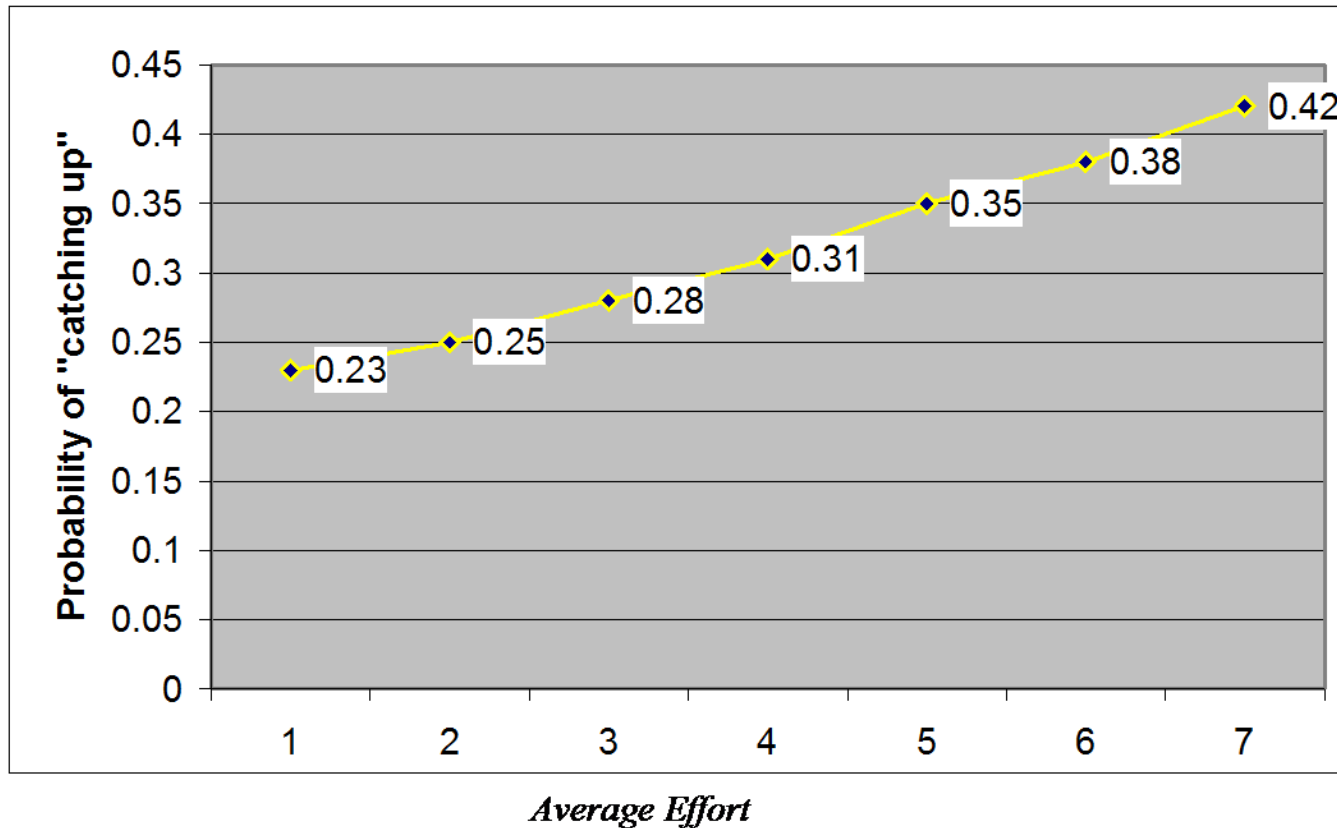

Figure 5 *(Impact of Behavior)*

Average Behavior Marks(1 = Excellent, 2= Satisfactory, 3 = Unsatisfactory)
(CEMS student; Non-Asian Student; from Cohort 1; with attendance rate of 92%; effort of 6; % of effective math teachers of 50)

Impact of Effort

Figure 4 *(Impact of Effort)*

(CEMS student; Non–Asian Student; from Cohort 1; with attendance rate of 92%; behavior of 2, percentage of effective math teachers of 50)

In high-poverty environments student disengagement and academic failure in the middle grades can lead to educational doom

- In Philadelphia, for example, 6th-graders who attend less then 80% of the time, fail math or fail English have only about a 10% chance of graduating on time, and a 20% chance or less of graduating at all

- Up to 50% of eventual dropouts can be identified in the 6th grade; up to 75% by the end of 8th grade

Attendance

1996-97 6th g. students attending 70-80% of the time (n=1087)

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	9%	0	0	0	0	0	0
7th	0	78%	13%	0	0	0	0	0
8th	0	5%	69%	13%	1%	0	0	0
9th	0	0	0	73%	55%	41%	16%	6%
10th	0	0	0	2%	29%	27%	15%	7%
11th	0	0	0	0	1%	18%	8%	4%
12th	0	0	0	0	0	1%	20%	11%
On-Time Grad	NA	NA	NA	NA	NA	NA	10%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	4%
Left SDP	0	8%	17%	12%	14%	13%	40%	NA

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file

- on-track to graduation
- 4-year grad

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Failed Math

Sixth-graders who fail math have less than a 1 in 5 chance of making it to the 12th grade on time

- Only 21% graduate either on time or with one extra year

1996-97 6th g. students who failed math (n=1424)

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	22%	0	0	0	0	0	0
7th	0	67%	24%	0	0	0	0	0
8th	0	6%	62%	21%	0%	0	0	0
9th	0	0	0	64%	59%	44%	16%	7%
10th	0	0	0	2%	24%	27%	18%	7%
11th	0	0	0	0	1%	14%	11%	4%
12th	0	0	0	0	0	0%	17%	14%
On-Time Grad	NA	NA	NA	NA	NA	NA	10%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	11%
Left SDP	0	5%	14%	13%	15%	13%	39%	NA

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file

- on-track to graduation
- 4-year grad

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Failed English

Sixth-graders who fail English have a 1 in 8 chance of making it to the 12th grade on time

• Only 16% graduate on time or with one extra year

1996-97 6th g. students who failed English (n=905)

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	28%	0	0	0	0	0	0
7th	0	59%	28%	0	0	0	0	0
8th	0	7%	55%	25%	0	0	0	0
9th	0	0	0	59%	61%	47%	16%	6%
10th	0	0	0	3%	21%	27%	20%	10%
11th	0	0	0	0	2%	12%	10%	5%
12th	0	0	0	0	0	1%	13%	13%
On-Time Grad	NA	NA	NA	NA	NA	NA	9%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	7%
Left SDP	0	7%	16%	13%	16%	13%	41%	NA

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file

▮ on-track to graduation
▮ 4-year grad

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Behavior is a powerful component of course failure in 6th grade

- 85% of 6th-graders who failed English and 75% of those who failed math also received a poor final behavior mark and/or attended less then 80% of the time

By comparison, students who enter middle school with basic skills, attend regularly, behave and pass their courses are likely to graduate

- 6th-graders who came to school most days, got good behavior marks, passed math and English and had basic (not proficient) academic skills had a 69% graduation rate
- In short, middle grades (even high poverty) schools work much better for the students for whom they were traditionally designed
- In many large cites or high-poverty areas these students are in short supply. Less then a quarter of the 6th-graders might match this description

Comparison Group

Sixth-graders with 90%+ att., excellent behavior, passed math and English, and scored at or above basic on the 5th-grade PSSA math and reading have more than a 3 in 4 chance of making it to the 12th grade on time
  • 69% graduate on time or with one extra year

1996-97 6th g. comparison group (n=1225)

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
6th	100%	0%	0%	0	0	0	0	0
7th	0	92%	1%	0	0	0	0	0
8th	0	1%	92%	1%	0%	0%	0	0
9th	0	0	0	87%	8%	5%	1%	1%
10th	0	0	0	0	76%	7%	2%	2%
11th	0	0	0	0	1%	74%	4%	3%
12th	0	0	0	0	0	1%	76%	14%
On-Time Grad	NA	NA	NA	NA	NA	NA	61%	NA
Grad +1 Yr	NA	NA	NA	NA	NA	NA	NA	8%
Left SDP	0	6%	7%	12%	14%	13%	16%	80%

"Left SDP" includes all 'leavers': student transferred, moved, withdrew or otherwise left the District and is no longer in SDP data file
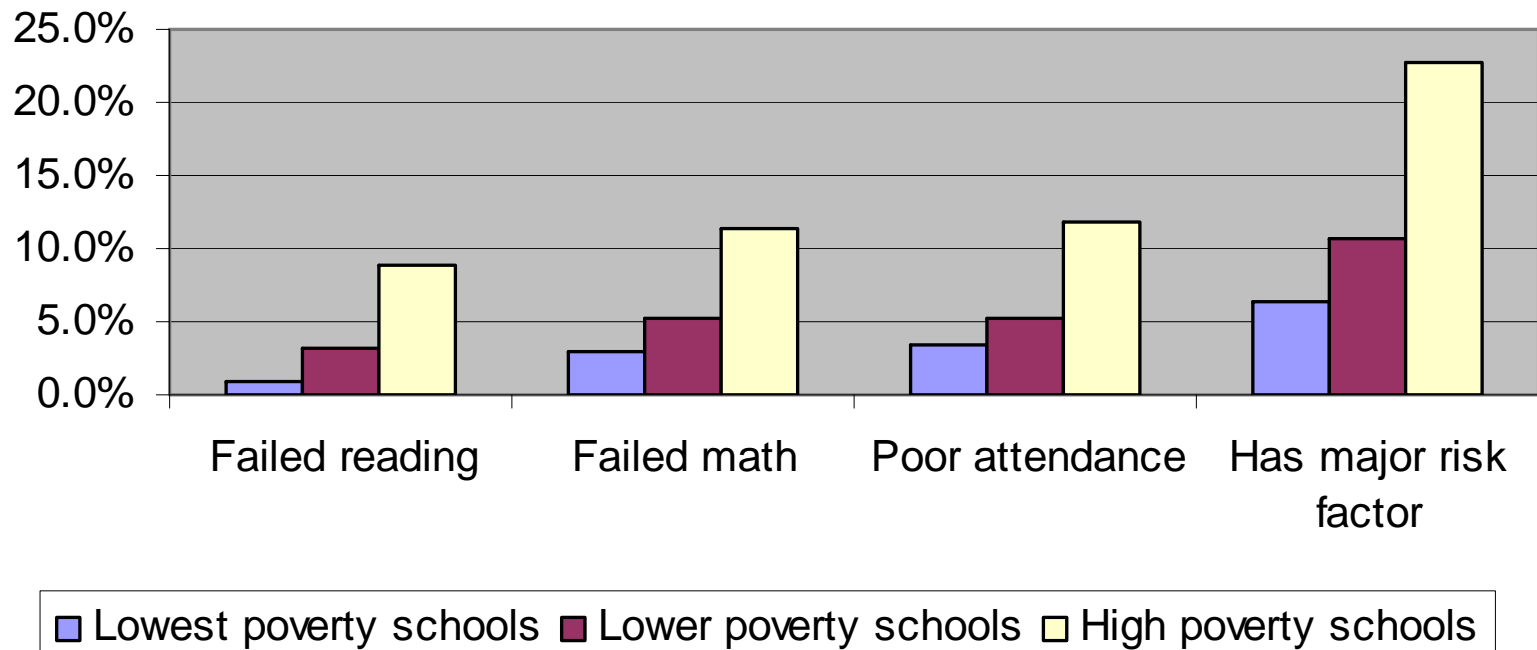
☐ on-track to graduation
☐ 4-year grad

*right-hand columns may >100%, as 12th graders and grads overlap (grad status being 1 of 6 status codes that students carry)

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Poverty is a driving force

Impact of Poverty on 6th-Grade Risk Factors

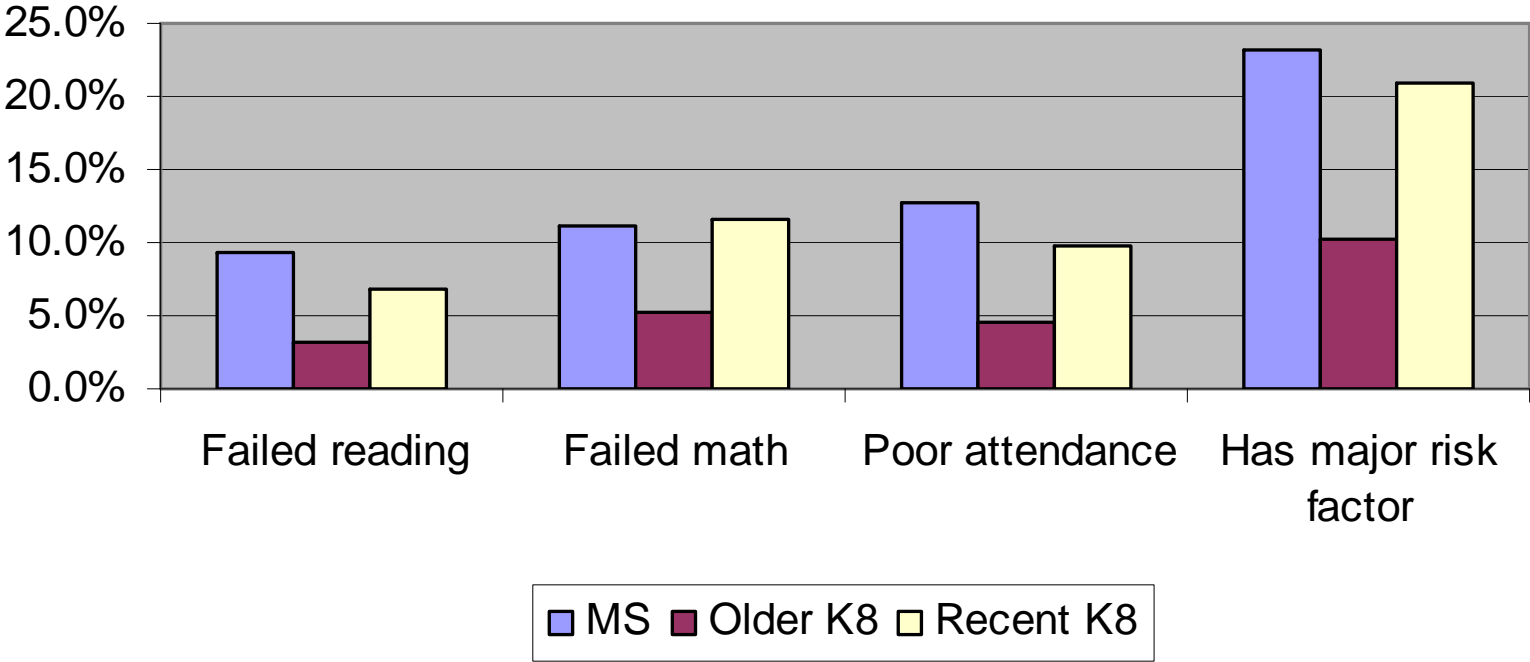**Percent of 6th Graders with Risk Factors by Poverty Level 2003-04**

Creating smaller, more personalized and more community-based middle schools can help

By itself this will not be enough

Impact of K-8s on 6ᵗʰ-Grade Risk Factors

**Percent of 6th Graders with Risk Factors
by School Type 2003-04**
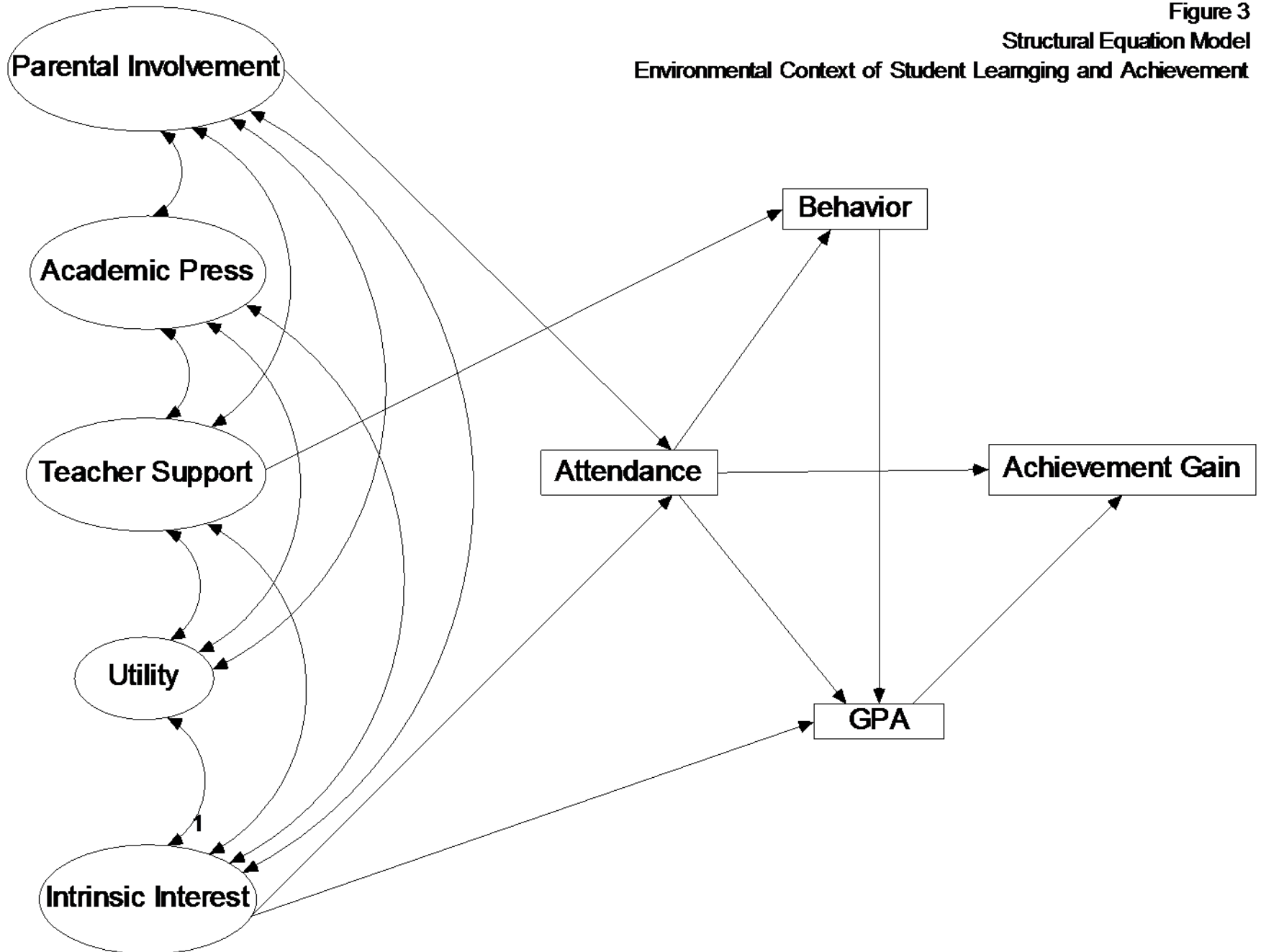

Legend: ■ MS ■ Older K8 □ Recent K8

Finding 3

Creating high-poverty middle schools that prepare all students for success in high school is possible

The ABCs of dropout prevention that keep middle grades students on the graduation path also drive achievement gains

- Attendance

- Behavior and Effort

- Course Performance

This is Very Important:
It lets us create a unified field theory
of middle grade improvement

Smart organization of schooling + effective instructional programs + teacher quality + public health prevention model

= Large achievement gains and increased graduation rates

Smart Organization

- Internal organization is as important as external organization. Large middle schools organized into true small learning communities, small middle schools, elementary-middle, K-8, and 6-12 can all work

- Key is to organize high-poverty middle schools so teams of skilled adults instruct a manageable number of students in need and have the time and resources to provide the supports necessary.

- Interdisciplinary teacher teams with time built into the schedule for collaborative work, looping (same teachers stay with students for two or more years), and no more than 75-90 students for each teacher are as important as overall school size

Effective Instructional Programs

- Need to be research-based, challenging, and engaging

- Teachers need coherent, focused and sufficiently detailed instructional materials for their lessons. Can not demand constant creation, modification, and supplementing by teacher.

- Standards-based instruction needs to be supported by sufficient and on-target extra help.

Teacher Quality

- Good induction programs and support for new teachers
- Cannot be a chaotic learning environment
- High-quality professional development
- Non-evaluative implementation support available (i.e. instructional coaching)

Public health prevention and intervention model: Findings from Philadelphia Project

Three levels of interventions needed

- School-wide preventive measures-aim to eliminate 75% of problems at this level

- Targeted interventions for students who need additional supports (15-20%)

- Intensive individual supports for small number of students with multiple risk factors (5-10%)
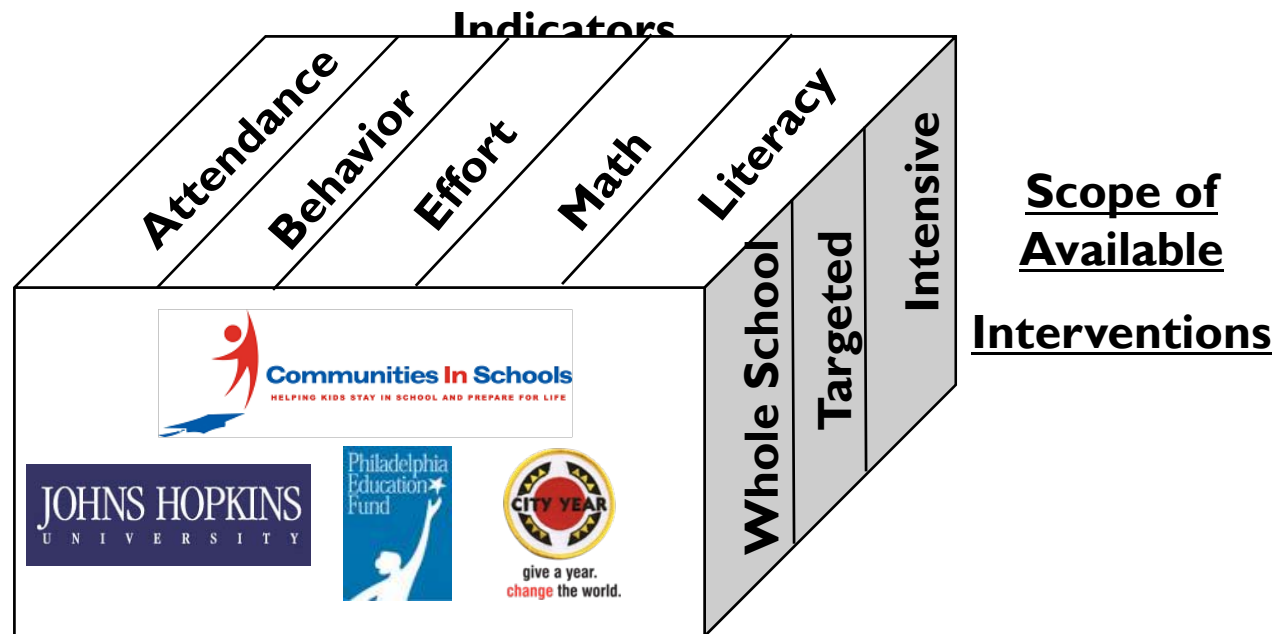
Multi-Tiered Prevention and Intervention System

	Academic Interventions	Behavioral/ Attendance Interventions
Whole School Preventative	Research and Standards Based Core Curriculum Extended Time Math and Literacy Blocks Benchmark Assessments	Positive Behavior Supports Attendance Campaigns (first absence brings a response/social incentives) Hands On/Minds On Courses (Music, Art, Science, Debate, Sports)
Targeted	Reduced Class Size Elective Replacement Extra Help Courses Linked to Core Course	Behavior/Attendance Team-Problem Solving, Contracts and Daily Monitoring Mentoring
Intensive	Tutoring	Case-managed Social Service Supports

Diplomas Now: groundbreaking collaboration designed to provide student support needed in the most challenging middle and high schools

Keeping Middle Grades Students On-Track to Graduation
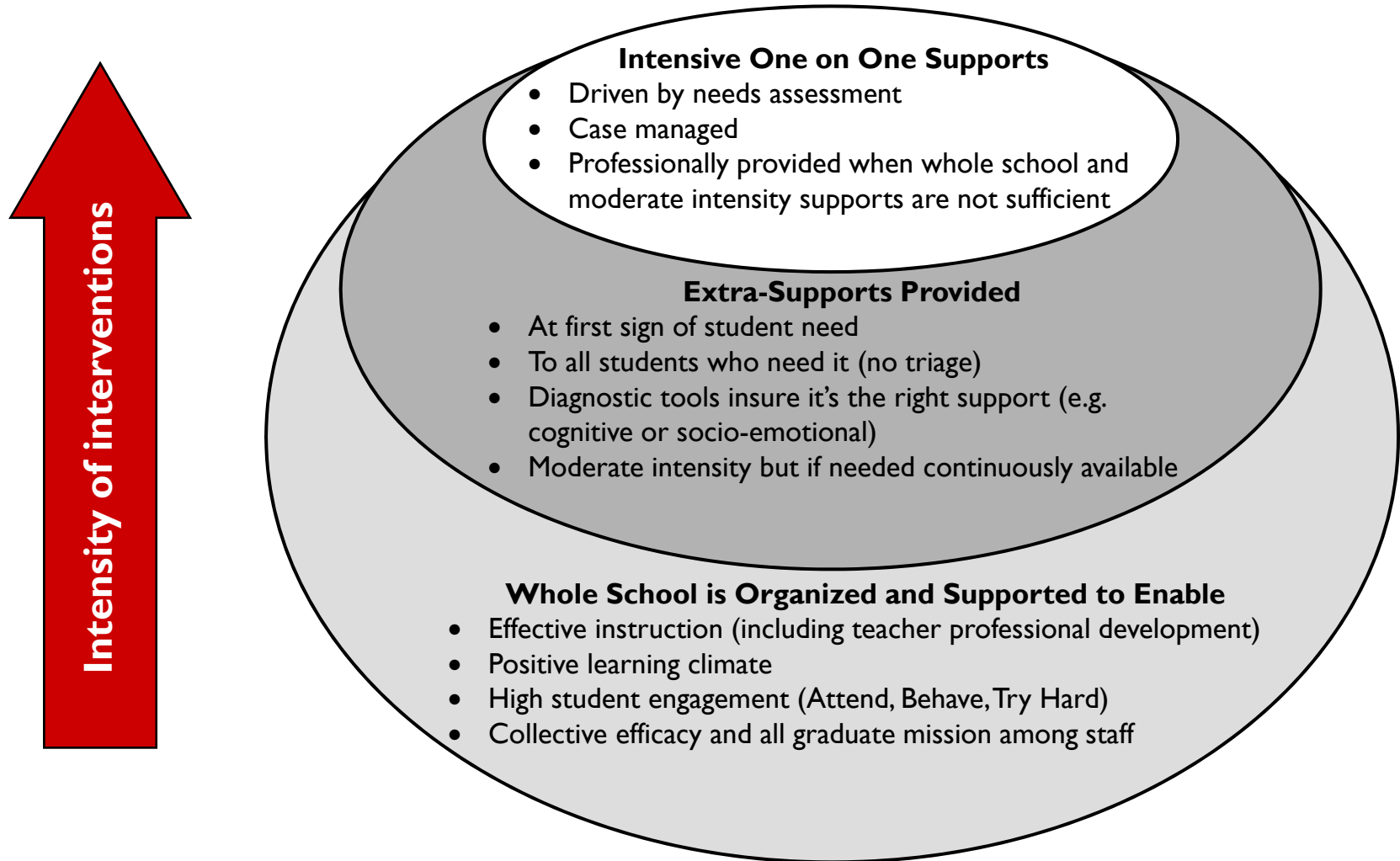
- Combining **whole school reform, national service** and **integrated student supports** with an **early warning system** and **on-site coordination** to provide a multi-tiered system of support

- By regularly monitoring student performance related to key of-f and on-track indicators, we are able to identify which students are veering off track,, target appropriate interventions, and if needed, increase the intensity or change the type of intervention until success is achieved.

The Diplomas Now School Design

Providing the Right Support to the Right Student at the Right Time

Intensity of interventions

Intensive One on One Supports
- Driven by needs assessment
- Case managed
- Professionally provided when whole school and moderate intensity supports are not sufficient

Extra-Supports Provided
- At first sign of student need
- To all students who need it (no triage)
- Diagnostic tools insure it's the right support (e.g. cognitive or socio-emotional)
- Moderate intensity but if needed continuously available

Whole School is Organized and Supported to Enable
- Effective instruction (including teacher professional development)
- Positive learning climate
- High student engagement (Attend, Behave, Try Hard)
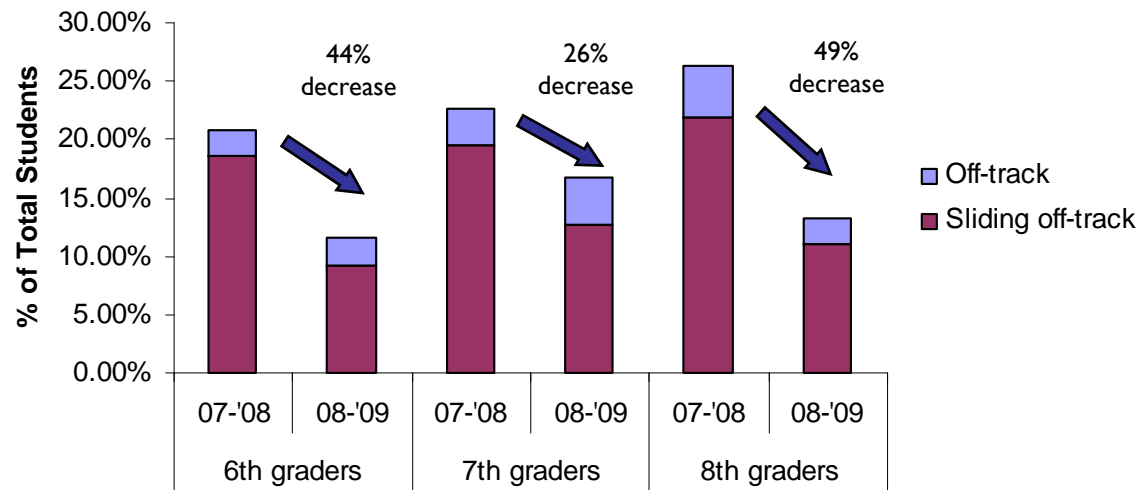- Collective efficacy and all graduate mission among staff

Early on in the collaboration, there has been a significant impact at the pilot middle school

- **Attendance –** 41% decrease in off-track students
- **Behavior –** Suspensions down 86%, suspension days are down 80%
- **Course Performance –**
    - Reading: 20% decrease in off-track students*
    - Math: 26% decrease in off-track students*

Students Off-track in Attendance

Attendance Definitions: Off-track: students with <80% attendance; Sliding Off-track: students with 80-90% attendance

*Students being served by City Year Corps Members

Final Conjecture

- With the tools and knowledge at hand we can make middle schools much more successful and effective

- But to reach the promised land of middle grades that engage, educate and keep all students on the path to graduation prepared for success in adult life, we will need more invention

Improving the quality of student coursework will be key

- Coursework needs to be benchmarked to college readiness (CR) standards but meaningful to middle grades students
- Need tangible intellectual products that a) demonstrate students are progressing toward CR, b) provide middle grades students with a sense of accomplishment and pride, and c) enable parents to play a supportive role
- Think the academic equivalent of merit badges

To fully engage middle grades students we need to honor their desire for adventure and camaraderie

- Need educational activities that provide this as well as avenues for short-term success

- Need to re-think electives: Consider drama, debate, robotics, Lego competitions, service learning

- Look for ways to harness peer pressure in positive manner-e.g. homeroom competitions

We need to harness the full potential of early warning and intervention systems

- Focus on effective intervention, not just identification
- Recognize and build on student strengths
- Implement in schools before have state data systems-All the key data are in the school
- Provide time for teachers to continually analyze and act on early warning data
- Match resources to student needs but practice intervention discipline
- Evaluate effectiveness of interventions
- JHU, PEF and AED working on it

And???????

For More Information

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