

Keeping Middle Grade Students on the Path to High School Graduation

Recent Research Findings

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Research Question:

**What Role do the Middle Grades
Play in Enabling or Preventing
High School Graduation**

Research Finding:

The Middle Grades Play Quite a Large Role in Establishing the Odds that a Student will Graduate from High School, Particularly in High Poverty Environments

Why the Middle Grades Matter

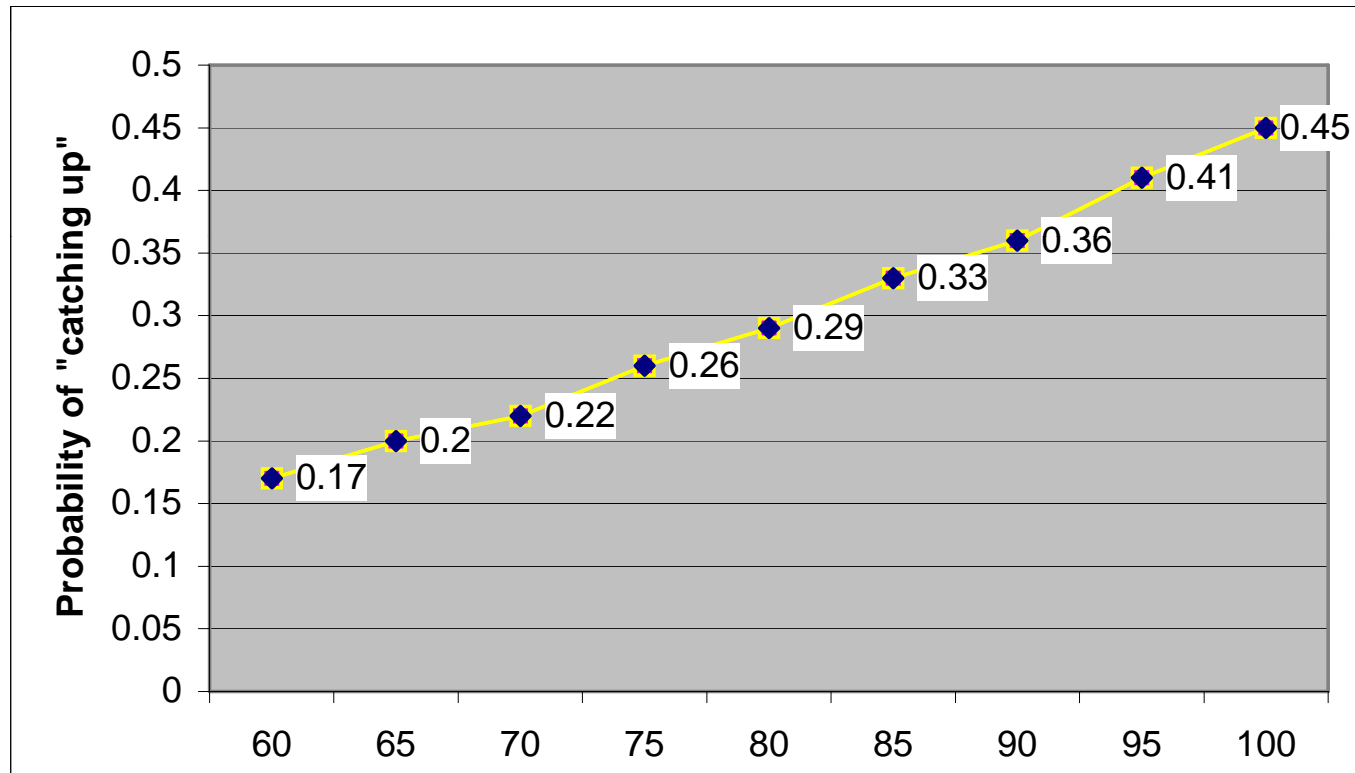
- Students who enter high school more than a grade level behind struggle to succeed in standards-based courses and pass exit exams
- Half or more of eventual dropouts may fall off the path to graduation in the middle grades
- Failing to succeed in the middle grades is a major risk factor for involvement with the juvenile justice system and teenage pregnancy which in turn severely limit the chances that student will graduate
- The middle grades are when students make an independent choice about school engagement and effort

Study 1: What Factors Influence Large Achievement Gains in High Poverty Middle Schools

- We found that having a better than average teacher two out of three years, and student attendance, behavior, and effort all had independent effects
- In 3 representative high poverty middle schools- 75% of students who came to school every day, tried hard, had good behavior and better than average teachers two out of three years gained 10 NCE's in math between 5th and 8th grade

Impact of Attendance

Figure 3 (*Impact of Attendance*)

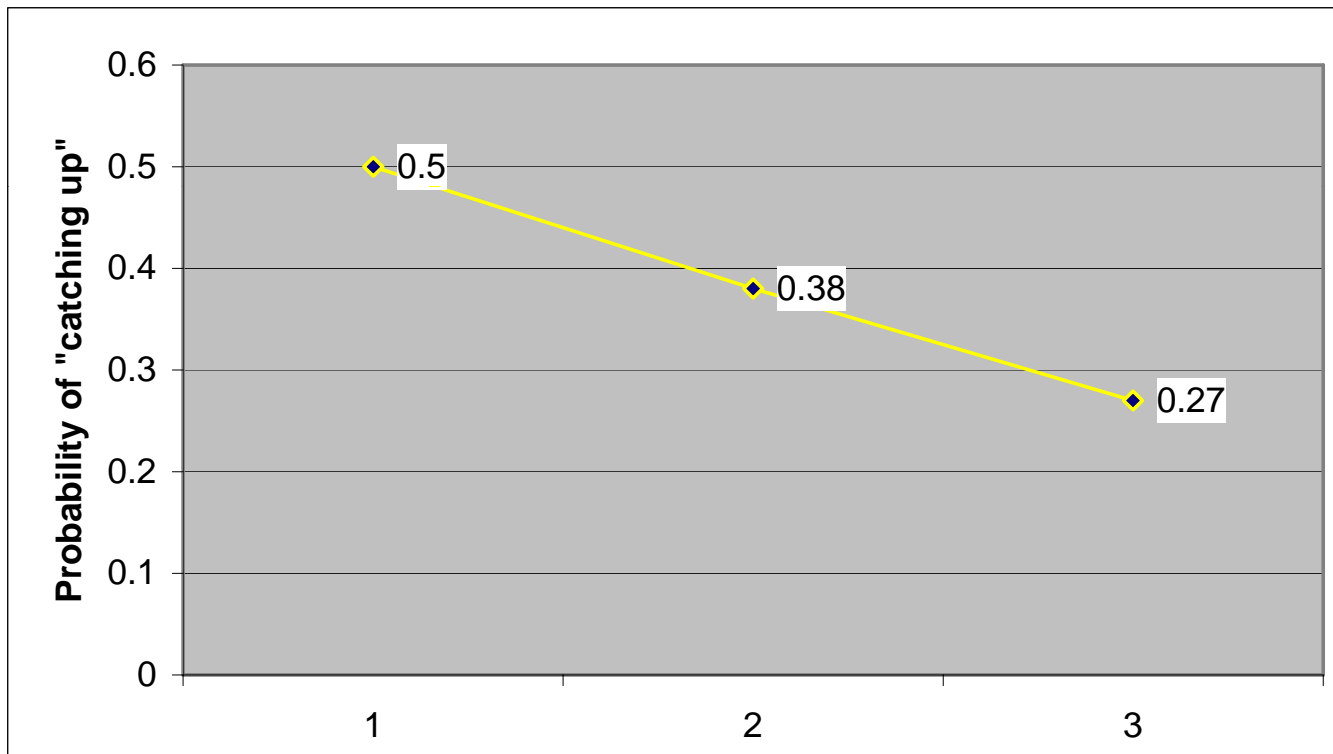


Percentage of total school days attended

(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

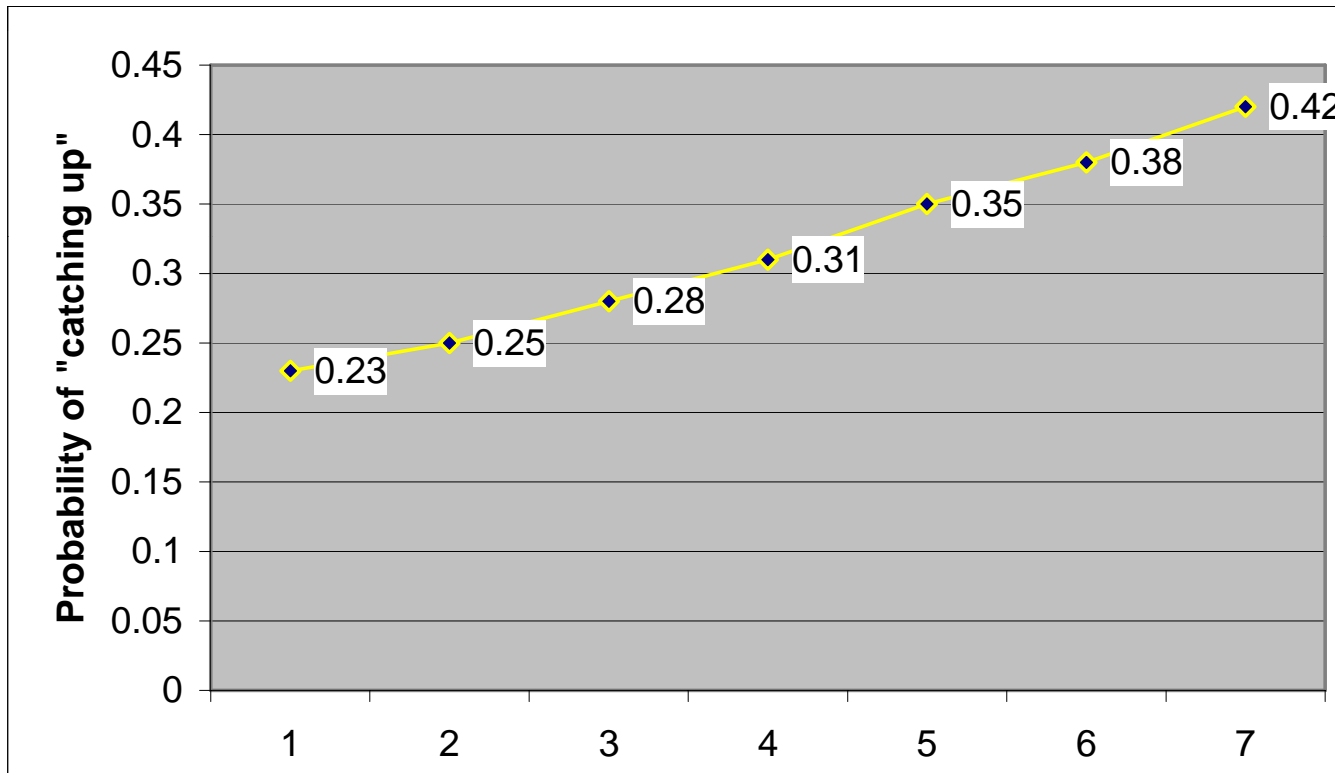
Figure 5 (*Impact of Behavior*)



*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*)



Average Effort

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

Large Achievement Gains Cont.

- The postscript is that only 29% of the students in the three schools had strong attendance, good behavior, high effort and better than average teachers two out of three years.

Study 2: How Early in the Middle Grades Can we Identify Students Who Are Falling Off the Path to Graduation?

- We wanted to find variables that had both high reliability—at least 75% of the students with the characteristic did not graduate—and high yield—collectively the variables should identify at least 25% of future dropouts

Data and Methods

- We followed students enrolled in the 6th grade in Philadelphia in 1996-1997 through 2003-2004 (one year beyond standard time to graduate)
- We also looked at more recent cohorts of 6th graders (1998-99, 2000-01, 2002-03) to verify our findings
- We did a preliminary screen of about 20 variables (i.e., test scores, overage, course failures, attendance, behavior marks) to see which, if any, could identify as early as 6th grade students at high risk for falling off the graduation track

Initial Findings-- 4 Powerful 6th Grade Predictors of 'Falling Off Track'

- Attending school less than 80% of the time
- Receiving a poor final behavior mark
- Failing Math
- Failing English

Significant Numbers of 6th graders had these Risk Factors

- Each year, between 1000 to 2000 6th graders in Philadelphia have each of these risk factors
- Students typically have one or two risk factors. Only a few have three, virtually none have all four
- Altogether about 3500 6th graders in 1996/97 had one or more of these risk factors

These 6th Graders Account for Large # of the Districts Non-Graduates

- 6th graders who do not attend regularly, receive poor behavior marks, or fail math or English have no more than a 10-20% chance of graduating on time, and a 25% chance of graduating at all
- These students account for about 40% of all students who will not graduate on time, if at all

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)

Follow Up Studies

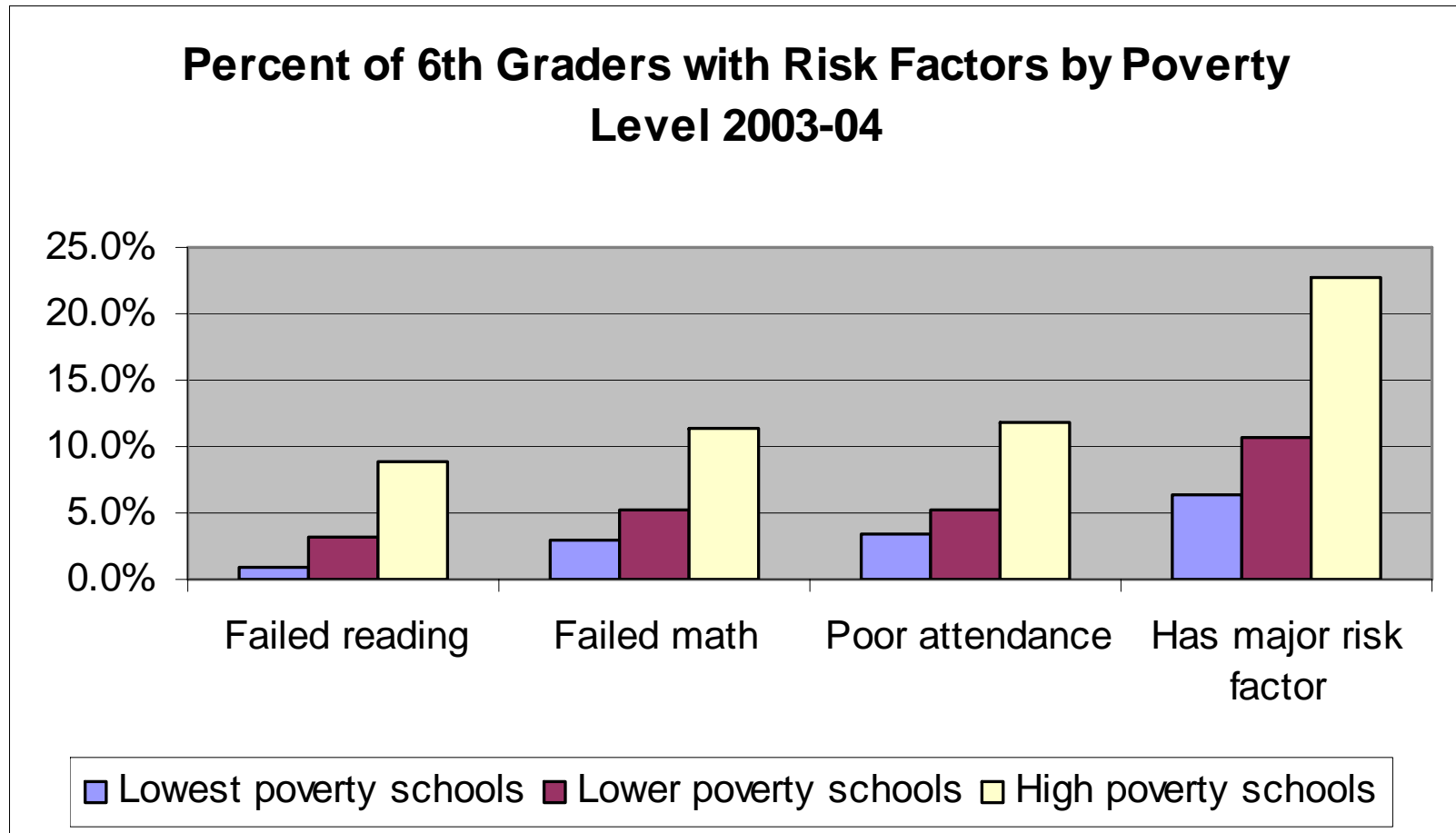
- Looked at later cohorts, replicated in two other cities- predictive power of attendance, behavior, and course performance held (ABC's)
- Controlling for the ABC's made being over-age on in special education non-significant, as well as prior achievement
- Found that key to attendance is being in the bottom of the distribution not an exact level, in one city 80% or below is highly predictive, in another 90% or below
- Continuous mild misbehavior is as problematic as being suspended
- 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 than 80% of the time

A Closer Look:

Why Are Attendance, Behavior and
Course Performance So Critical and
Why do they Decline in the Middle
Grades

Its All About Poverty

Impact of Poverty on 6th Grade Risk Factors



In High Poverty Neighborhoods
Attendance Declines Significantly
in the Middle Grades

Impact of Adolescence and Poverty on Attendance in Baltimore

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

Source: BNIA

Why Does Attendance Decline
and Behavior Worsen and Effort
Lessen in the Middle Grades?

The Onset of Adolescences Combined with Concentrated, Inter- generational Poverty Creates its own Set of Risk Factors

- There are the Developmental and Cognitive challenges all middle grade schools face- magnified by the freedoms of urban environments and large numbers of students with below grade level academic skills
- There are neighborhood challenges-gangs and criminal enterprises need young adolescent males
- There are the family responsibilities brought on by poverty which increase with adolescences

These Challenges are Met with an Inadequate Educational Response which Makes Matters Worse

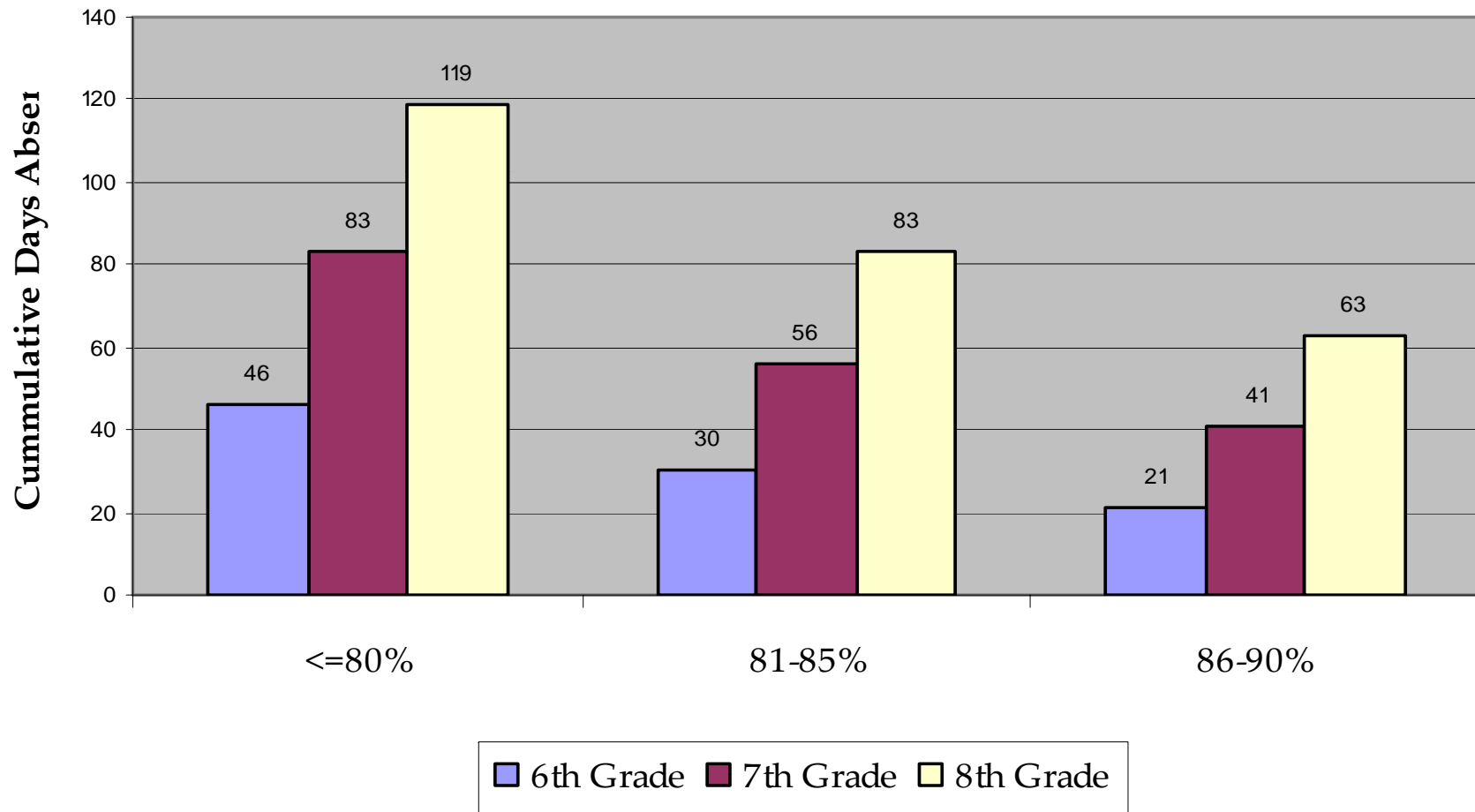
- There is the intense concentration of large numbers of students with emotional, social, and academic needs in a sub-set of middle grade schools
- There is an insufficient number of skilled and intransient adults in these schools and neighborhoods committed to middle grade student's development
- There are often poor physical facilities

As a result middle grade students in high poverty schools begin to disengage from schooling in large numbers and at a rapidly accelerating rate

- Some stop attending school on a regular basis-flight
- Some start acting out and being disruptive in class-fight
- Some just stop trying and start failing their courses-withdram

Absent Sustained Interventions
these Behaviors do not Self-
Correct Themselves

**Average Cummulative Days Absent Through the Middle Grades
by 6th Grade Low Attendance Categories
N = 9,125**



**Study 3: An Unsuccessful
Transition to the Middle Grades
and Involvement with the
Juvenile Justice System and
Teenage Pregnancy**

Research Question:

**Do Students with Off-Track
Indicators in the Middle Grades
Experience Out of School
Consequences**

Research Finding:

Yes, they represent the majority of males who will receive out of home placements in the Juvenile Justice System and Females who will give birth in High School

	% of Students Involved with Social Service Agency	% of All 6th Grade Cohort Involved with Social Service Agency	% of Females that Have a Child During Adolescence	% of All 6th Grade Cohort Females that have Child during Adolescence
Have 6 th Grade Risk Factor	28%	69%	19%	61%
No 6 th Grade Risk Factor	10%	31%	7%	39%

***6th grade risk factors include: poor attendance, poor behavior mark, fail math or fail English**

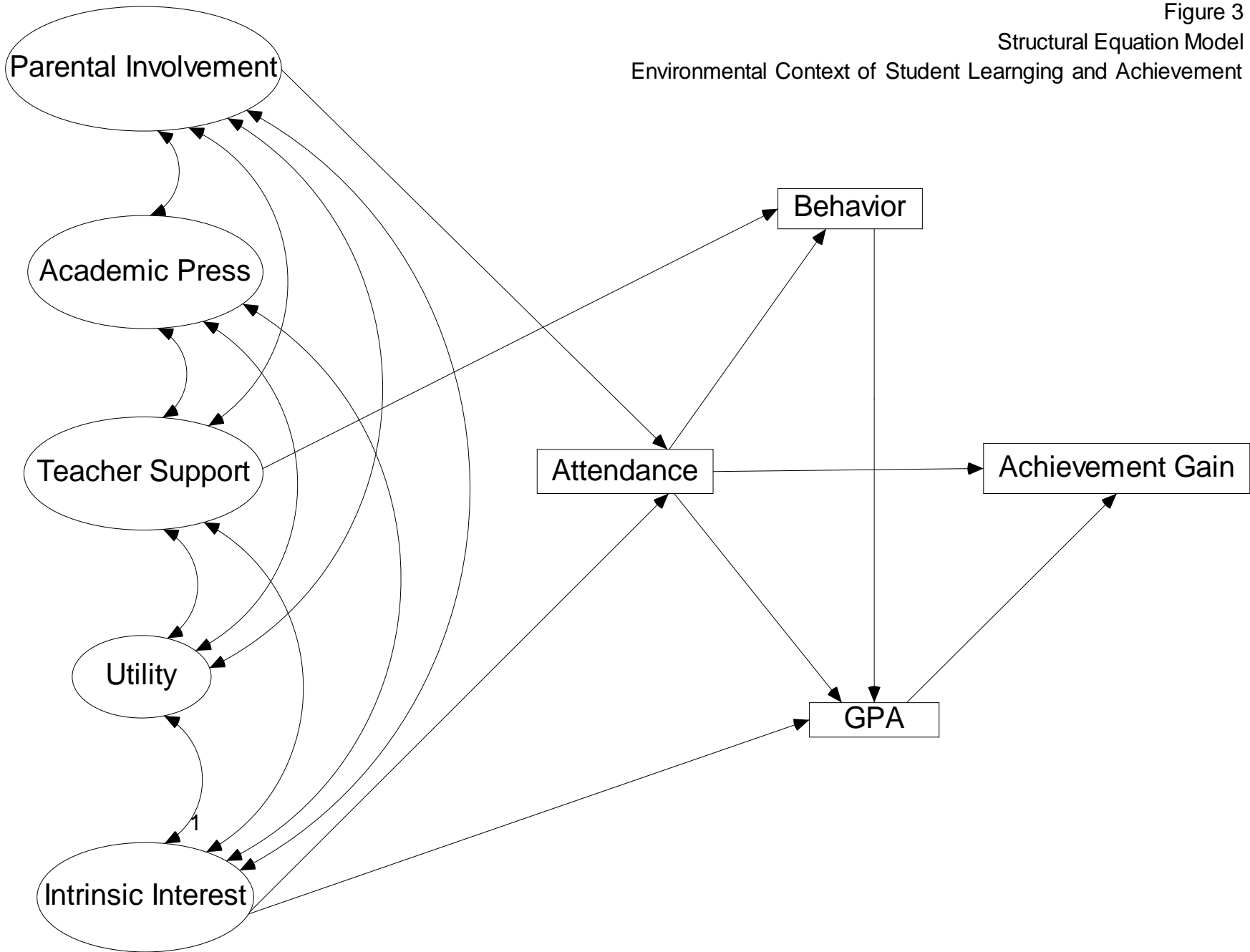
****Agency involvement includes: foster care, substantiated abuse and neglect, other DHS out of home placement (i.e., group home), juvenile justice out-of-home placement**

What's the Solution?

Study 4: Comprehensive Whole School Reforms Make A Difference

- Each component impacts a different lever of improvement-a small but significant amount
- This is why partial implementation or a focus on one aspect always leads to disappointing outcomes

Figure 3
Structural Equation Model
Environmental Context of Student Learning and Achievement



Study 5: What is the Impact of the Talent Development Middle Grade Model on High School Graduation?

- Examined impact of the first two TDMS schools on high school graduation
- Found a significant and substantial impact-equal to impact found for pre-k or reduced class size in elementary schools
- Supported importance of reducing off-track indicators-they went down in the TDMS schools, achievement went up, graduation rates followed

Chart 5 – Progression of Control school students from 6th grade to 12th

N = 604	98-99	99-00	00-01	01-02	02-03	03-04	04-05
<i>6th Grade</i>	100%	3%					
<i>7th Grade</i>		92%	5%				
<i>8th Grade</i>		1%	84%	10%			
<i>9th Grade</i>			2%	80%	36%	16%	5%
<i>10th Grade</i>				1%	50%	13%	9%
<i>11th Grade</i>					1%	26%	6%
<i>12th Grade</i>						1%	40%
<i>Graduated</i>							33%
<i>Left District</i>		4%	9%	9%	13%	44%	40%
<i>Blue cells</i>	=	Expected Grade Trajectory					

Chart 4 – Progression of TDMG school students from 6th grade to 12th

N = 540	98-99	99-00	00-01	01-02	02-03	03-04	04-05
<i>6th Grade</i>	100%	1%					
<i>7th Grade</i>		99%	4%	2%			
<i>8th Grade</i>			96%	5%	1%	1%	
<i>9th Grade</i>				91%	22%	9%	4%
<i>10th Grade</i>					66%	13%	8%
<i>11th Grade</i>						44%	7%
<i>12th Grade</i>							51%
<i>Graduated</i>							45%
<i>Left District</i>				2%	11%	33%	30%
<i>Blue cells</i>	=	Expected Grade Trajectory					

Comprehensive Whole School Reform, however, is not Enough to Keep All High Poverty Students on the Graduation Path

- Although significantly reduced substantial numbers of students still had off-track indicators
- Overall graduation rate, even though, considerably higher than control schools did not break 50%
- Students attend a very dysfunctional high school but can't assume it's the only reason they did not graduate

**What Additional Interventions
Does Research Indicate Needs
to be Done**

Link Early Warning Systems to Tiered Interventions

- Need to be able to respond to the first signs that a student is falling off track
- Need school-wide, targeted, and intensive responses but need intervention discipline only use intensive response if school-wide and targeted has not worked
- Great place to use National Service organizations (City Year, Americorps) can provide the person power to provide mentoring, tutoring, home work support, and manage attendance and behavior programs at the needed scale for an affordable price

Public Health Prevention Model for Student Disengagement

Keeping Middle Grade Students on Track to Graduation

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

To Learn More

- Obtain the power point at www.gradgap.org
- Stay tuned for our new report coming out in Jan 2008 -"Keeping Middle Grade Students on the Graduation Path"
- See "What Your Community Can Do to End its Dropout Crisis" at www.csos.jhu.edu
- E-mail rbalfanz@csos.jhu.edu