

To: The Joint Committee on Adequate Education
From: Destie Sprague, Children's Alliance of New Hampshire
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Memo: Evidence-Based Programs to Target the Achievement Gap

Disparity among our children is an ongoing concern in NH and across the nation. Since its inaugural edition, the Kids Count New Hampshire semi-annual reports have pointed to the differences in health, education, and child wellness outcomes for our state's children- differences often masked by the reports of high averages from the media. In an effort to initiate a deeper ongoing conversation about disparate outcomes for New Hampshire's children, Kids Count New Hampshire 2008 will focus on building awareness and community outreach among those communities in our state with the poorest outcomes for children.

Both in New Hampshire and nationwide, the increased attention to disparity across all indicators has spawned a series of new efforts to fight this trend. Initiatives such as NH Healthy Kids have successfully reduced the gaps in health outcomes for low-income children, and many programs have targeted the achievement gap for at risk students.

The resounding theme when targeting the achievement gap is inequity: those who start with less, receive less in almost every arena, and consequently, have substantially poorer outcomes. The resulting efforts- the highlights of which are outlined below- are designed to reverse this trend, and ensure that all communities and families have the opportunity to thrive.

1. Early Education

A wealth of research indicates that children exposed to quality early education:

- have significant increases in cognitive skill and academic performance (Reynolds, et al, 2002)
- have higher achievement test scores, better attitudes toward school, and higher graduation rates than their peers (High/Scope Perry Preschool Project)
- have better social adjustment and lower rates of juvenile delinquency (Chicago Parent-Child Centers)
- have reduced need for remedial services later (Reynolds, et al, 2002).

Early education appears to be the most effective way to reduce achievement disparity among students in early grades. Although some studies indicate that the positive benefits fade with time, there is evidence that students who receive compensatory early education programs, such as Head Start, go on to lower quality schools in higher grades- the likely culprit of the "fade effect" (Lee and Loeb, 1995).

The most effective early education programs are of high quality; specific recommendations, from Dr. Stephen Barnett and the National Institute for Early Education Research (2002), include:

- Curricula must be intellectually rich and sufficiently broad to address children's developmental needs in all domains;
- Programs should start no later than age three;
- Programs must have an infrastructure adequate to support best practices, professional developmental and ongoing evaluation and accountability;
- Programs must engage in active partnerships with parents and accommodate their needs, including child care;
- Resources should be primarily focused on disadvantaged children, recognizing that income is not the only risk factor for poor achievement; Universal pre-k programs can target resources for disadvantaged children by providing them with smaller classes, better teachers, more hours, and a sliding fee-scale; and
- The existing array of public school, Head Start, and private programs can all be used, but both standards and resources must be substantially increase to produce the desired results.

Specific policy recommendations include: increased access to full-day kindergarten-studies have consistently found that students who attend full-day kindergarten experience greater gains in most measures than half-day students (Yan and Lin, 2004); increased access to 'remedial' early education programs such as Head Start; increased quality in early care settings, particularly those which serve low-income communities; and public pre-k options.

2. Quality of Services

Decades of research identifies a variety of factors to explain achievement gaps across students and districts. Teacher quality has shown to be the 'within school' (as opposed to external factors, such as socioeconomic status) factor most highly correlated with student achievement- more than any other measurable, school based factor. While there is consensus on the importance of teacher quality, there is little research to help us define what that means in a practical sense, and measurable factors such as experience and degree level are only part of the story (Goldhaber 2002).

Quality-improvement efforts which have been shown to have a positive impact on student achievement include:

- **Professional Development.** Professional development (PD) is seen as the primary means of improving teacher effectiveness and reducing achievement gaps. Empirical studies show that PD focusing on content, that involves active learning (for teachers), and is integrated into a larger professional development plan, is most likely to enhance knowledge and skills (Garet, et al, 2001).
PD should take place over time, and should focus on "communities of practice" (i.e., teachers within a grade level) The most promising PD involves mentoring, modeling, and coaching programs, which institutionalize continuous learning and dialogue, and which are embedded into the daily routines of a school (Reitzig, 2002).
- **Teacher compensation.** Many studies have shown that there is a significant relationship between teacher salary and student achievement (Goldhaber and Anthony, 2003). Higher compensation also increases quality of teachers hired and increases the likelihood that they will have majored in the subject area they teach

(Figlio, 2002). Teacher compensation also positively influences retention (Hanushek and Pace, 1995).

In low-income schools, it is particularly important to focus on quality and retention, (numerous studies indicate these schools have a difficult time attracting and retaining high quality teachers). A financial reward for these challenging positions is one policy recommendation intended to overcome that (Goldhaber and Anthony, 2002)

- **Principal leadership.** High achieving schools have principals who encourage ongoing reflection, support a universally understood mission, and who foster leadership at levels- which has the additional impact of increasing teacher quality (Education Trust, 2007).

High achieving schools, even in low-income districts, ensure that children with the highest gaps in resources and achievement have the highest quality teachers available.

3. High School Expectations

The single biggest predictor of post-high-school success is quality and intensity of high school curriculum (US Dept of Education). Unfortunately, research indicates that nationally, problems in disadvantaged districts are exacerbated by providing fewer resources and lower expectations to students, when, arguably, they need more. For example,

- Students in poor schools receive A's for work that would earn C's in affluent schools (Dept of Education, 1997)
- High-poverty, high-minority schools have more classes taught by out-of-field teachers (University of Pennsylvania, 2000)
- Poor and minority students have more inexperienced teachers (defined as those with less than 3 years of experience) (Nat'l Center for Education Statistics, 2000)

Despite these numbers, many schools in disadvantaged areas perform well, and are able to bridge the achievement gap, primarily by setting high standards and by systemizing these standards. High performing schools:

- Standardize success. They:
 - Have clear and specific goals for what students should learn in every grade;
 - Provide teachers with common curriculum and assignments;
 - Have a regular vehicle to ensure common marking standards;
 - Assess students every 4-8 weeks to measure progress; and
 - Act immediately on the results of those assessments.
- Set high expectations. Schools in which all students are in a demanding college preparatory curriculum have proven that:
 - Low-quartile students gain more from college prep courses in both reading and math (US Dept of Education, 2000), and
 - Challenging curriculum results in lower failure rates, even for the lowest achievers (SREB, 2002)

4. School Community Building and Wellness

This area is difficult to quantify, but it clearly has an important role to play in bridging the gaps in student achievement. A substantial body of research has shown that well designed student and family services strengthen the school community, and can improve a variety of outcomes for children, from mental, physical, and emotional health, to academic achievement.

- Parental involvement

Some studies show that as much of half of the gap in school readiness is due to differences in parenting. Some large-scale studies show that outreach programs can shape parental behavior and positively affect children's achievement.

- Family literacy programs have shown an increase in at-home reading practices, resulting in higher language scores for children (Whitehurst).
- The Early Head Start Demonstration study has shown that home-based and center based intervention programs result in more family support for language and learning.
- Families participating in the Chicago Parent Child Centers program had lower grade retention and special education placement rates.

- Peer-to-peer mentoring

- Peer and cross-age tutoring and mentoring has been shown to have positive effects for both tutors and tutees. Both show improvement on achievement tests and have increased interest in subject matter (Cohen, Kulik, and Kulik). Structured programs, emphasizing goal setting and role definition have significantly larger impact than unstructured programs.
- Traditionally at-risk students (those of lower socio-economic status, minority status, etc) have been shown to have particularly large gains through peer-assisted learning programs, especially in achievement tests and reading comprehension (Rohrbeck, 2003).

- Nutrition and fitness

- Studies have shown that at all grade levels, higher levels of fitness are associated with higher levels of achievement (California DOE, 2002). Strong physical education programming and recess can be an academic booster.
- Nutrition levels correlate with academic performance, and better nourished children perform significantly better in school (Taras, 2005). School breakfast programs may improve academic performance, cognitive functioning, and overall health.

A substantial body of research exists to support proven programs to ensure opportunity for all children. The Children's Alliance of New Hampshire would be pleased to assist you in your further efforts to support New Hampshire children and families.