



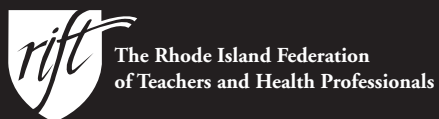
THE SHAPE OF THE STARTING LINE

A policy review on improving education in Rhode Island

By Tom Sgouros



Prepared for:



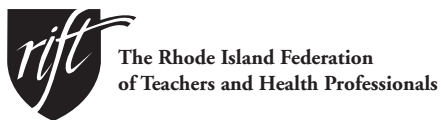
May 2006

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www.whatcheer.net

PREFACE

THE STATE OF public education in Rhode Island is troubled. Everyone knows that, but the discussions seem to change little, perhaps because of how they're conducted.

On the subject of education, business groups talk to legislators who talk to taxpayer organizations who talk to the press. But it often seems no one thinks it important to include teachers in the conversation.

Teachers are, of course, the people in the state who actually see what goes on in classrooms. Since most everyone else is just guessing, it makes no sense to ignore the teachers, and yet that's what regularly happens and, as a result, many important issues are simply left off the table.

If improving the performance of Rhode Island's schools were easy, it would have happened already. Our schools are buffeted by social and economic forces beyond their control. Over the past couple of decades, real wages have stagnated, housing costs have shot through the roof, and family lives have undergone profound changes. To imagine that our schools are immune to these changes is folly. To imagine that they can adjust to those changes while suffering under an arbitrary and inequitable funding regime is bizarre. To imagine that we can come up with policy solutions by ignoring the experiences of the teachers who demonstrate their commitment to education every single day is absurd – and yet those who pretend to expertise in education policy do exactly this at every education roundtable or conference they hold.

Reforming our schools to provide a high-quality education to all of Rhode Island's children isn't impossible. There are valid, consistently replicated, research findings we can rely on. We don't have to do this in the dark. But if we really want to succeed, we have to be honest about our evaluations, acknowledge that our efforts to reform the way education is delivered in Rhode Island will get nowhere unless the conversation involves the people who have the experience, who show the commitment, and who do the work: teachers.

This report contains a review of some important research findings about the links between poverty and academic success, and research relevant to several popular school reform proposals. It also covers matters relating to professional practice, school conditions, literacy and early childhood education. We look forward to engaging in the discussion about how to improve Rhode Island's schools - to provide a quality education to all our children.

Marcia Reback, *President*
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EXECUTIVE SUMMARY

IT IS WIDELY acknowledged that education in Rhode Island isn't working well for all children. Even partisans of the public education system acknowledge that the costs are high and performance seems low for the investment. This is especially true in the kinds of comparisons to other states that are commonly made. A litany of statistics makes the point: teacher salaries here are high compared to the median wage, school test scores are low compared to national averages and so on. The statistics are made familiar by endless repetition on talk shows, in political speeches and in the newspaper.

Under this blizzard of numbers lie some troubling truths. Yes, it is true that many urban schools in Rhode Island do not perform up to national averages. And yes, it is true that schools in Rhode Island are on average more expensive to run relative to many other places.

Unfortunately, these facts, in combination with the preconceptions of the legislature, city and town councils and the public, have helped to create an environment where the schools that need the most help get less and less of it every year, creating, in essence, two Rhode Islands. In one Rhode Island, high property values and relatively lower taxes allow the schools to get the support they need, or at least close to it. In the other Rhode Island—where 35% of our children live—a dwindling tax base and concomitant high property taxes combine to create a situation where schools struggle to provide the basic services, let alone perform to the high standards enshrined by new

laws like 'No Child Left Behind.' In recent years, school performance all over Rhode Island seems to be improving, if slightly, but the gap between the richest school districts and the poorest is not shrinking (McWalters, 2006), and the urban districts remain far below the state average while the wealthier districts are above the national averages.

This is not to say that there are no underfunded schools in the suburbs nor that we lack success stories in the cities, but the trends are fairly clear. What passes for a disastrous budget in North Kingstown would be a blessing in Pawtucket, and what passes for success in East Providence would be cause for concern in Barrington. The achievement level of our schools is predictable from the poverty of the school district in which they are located.

These problems are not new; they have been a feature of our educational "system" for years. Fifteen years ago, under Governor Bruce Sundlun, our state attempted to chart an alternate vision:

Equity shall be defined as the equal treatment of students and taxpayers. It shall mean that a sufficient amount of money is allocated to enable all students to achieve learner outcomes and that the tax burden shall be based on ability to pay. It shall further mean that the money spent for a child's education shall not be a function of district wealth, and that all students shall have the same educational opportunities.

The quality of education provided must be a function of statewide wealth.
(21st Century Commission, 1992)

In the succeeding decade and a half, little was done to address the situation besides much wringing of hands. But we are not powerless; there is much we can do, and people all over the country have spent countless hours researching what works. This work is done. We can learn from it if we have the will.

The research on the relation between academic achievement and poverty is clear. If we really want to improve our schools, the first step is to improve the lives of our poorest citizens, and offer their children the chance to have the literacy experiences that middle-class children take for granted. Over a fifth of all children in Rhode Island—in all towns—live in families who earn less than the federal poverty line, up from 16% in 2001. These are children denied the advantages received by their peers of books and travel, but often also food, stable housing and their parents' time and attention. The quality of a school is obviously not irrelevant, but if a child arrives at school ill-prepared and distracted by hunger, illness or stress at home, it doesn't make the teacher's job any easier. No research says that a child born poor can't succeed, but it does tell us that the starting line isn't even.

If the state of Rhode Island really wants to find the will to improve the educational outcomes for poor children in Rhode Island, the places to begin are in the places where we can alleviate some of the bad effects of poverty on children. The state should:

- Try to raise the wages of the bottom tier of jobs by indexing the minimum wage and adopting living wage legislation;
- Further address the child care and health

care issues of the working poor by expanding the reach of the programs already in place;

- Promote adult basic education to increase the literacy of our working population, as well as the literacy of their children;
- Preserve the RIte Care program that is so important to keeping children healthy; and
- Improve health and nutrition programs that address child learning.

Children can also be helped more directly to achieve in school. The following measures are recommended:

- Establish a comprehensive system of early childhood education for Rhode Island's children;
- Enhance the early literacy work that is already being done here;
- Work to reduce class sizes, especially in the early grades;
- Repair the crumbling and unhealthy buildings in which many of our children attend school;
- Enhance school districts' access to curriculum and professional development services; and
- Support the many organizations that provide after-school programming and activities for middle-school and high-school students.

Fortunately, the research literature is equally clear about the effects of programs designed to address the needs of poor children. That is, initiatives like these are not wasted effort, but can have priceless effects on our children's lives and ultimately on our entire society.

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1. INTRODUCTION

NEWSPAPER READERS in Rhode Island are bombarded with statistics that purport to show that Rhode Island's schools are underperforming. One can't deny the statistics, but the reality is that statewide measurements tend to mask the real problems we face. For schooling, there are essentially two Rhode Islands. In one Rhode Island, well beyond our city borders, schools perform well on their own terms, and do well in national and international comparisons. Meanwhile, in the other Rhode Island—urban and poor—they don't. Blanket statements simply can't cover all of them, since the circumstances are so different.

While there are certainly cost savings possible in managing our school systems, overall, the urban schools are dealing with problems that go far beyond their walls. When a child shows up to school without a supportive family environment that prepares young children to learn, that's bad. When they also show up hungry or ill, that's worse. When their families have to move around because of their failure to secure affordable housing, that's very disruptive.

In today's climate of standards and high expectations, it is very important for students to be ready to learn, even at the earliest grades. If students are not ready, they are at a disadvantage, the teacher is at a disadvantage, and the student's peers are also at a disadvantage. If we want to improve school outcomes, we have to ensure that students arrive ready to learn—in the morning and in September.

The obstacles are large. More than a fifth of all Rhode Island's children live in households that subsist below the federally-defined poverty line. This is the highest rate in New England, and is up from 16% in 2000. Among cities of more than 100,000 people, Providence has one of the highest child poverty rates in the nation, behind only Hartford, Connecticut and Brownsville, Texas, and tied with pre-Katrina New Orleans (Rhode Island Kids Count, 2006). These are the children who arrive at school with a level of preparation that leaves them with an uphill battle to succeed (Ryan et al., 2006). Despite the obstacles, some will succeed, but the success of those few can't blind us to the fact that many more could succeed if their health and experiences prepared them for a learning environment.

Though poor children live in every town and city in the state, the bulk of these children are concentrated in just a few cities. In fact, 35% of all Rhode Island students attend a school in an urban district, a much higher concentration than most states. In general, our suburban and rural school districts perform at or above the standards of the nation, and compete well internationally. The "urban fringe" districts, like Cranston and Warwick perform at the average, and the urban schools (where we spend less per pupil than any other New England state) perform worse than students in other cities (McWalters, 2006). The link between income and achievement in Rhode Island can be seen quite clearly in Figure 1.1.

Comparison of Reading Proficiency in Rhode Island's Wealthiest and Poorest Communities.

● 2000 Family median income
■ % proficient, Reading Analysis and Interpretation Gr. 11

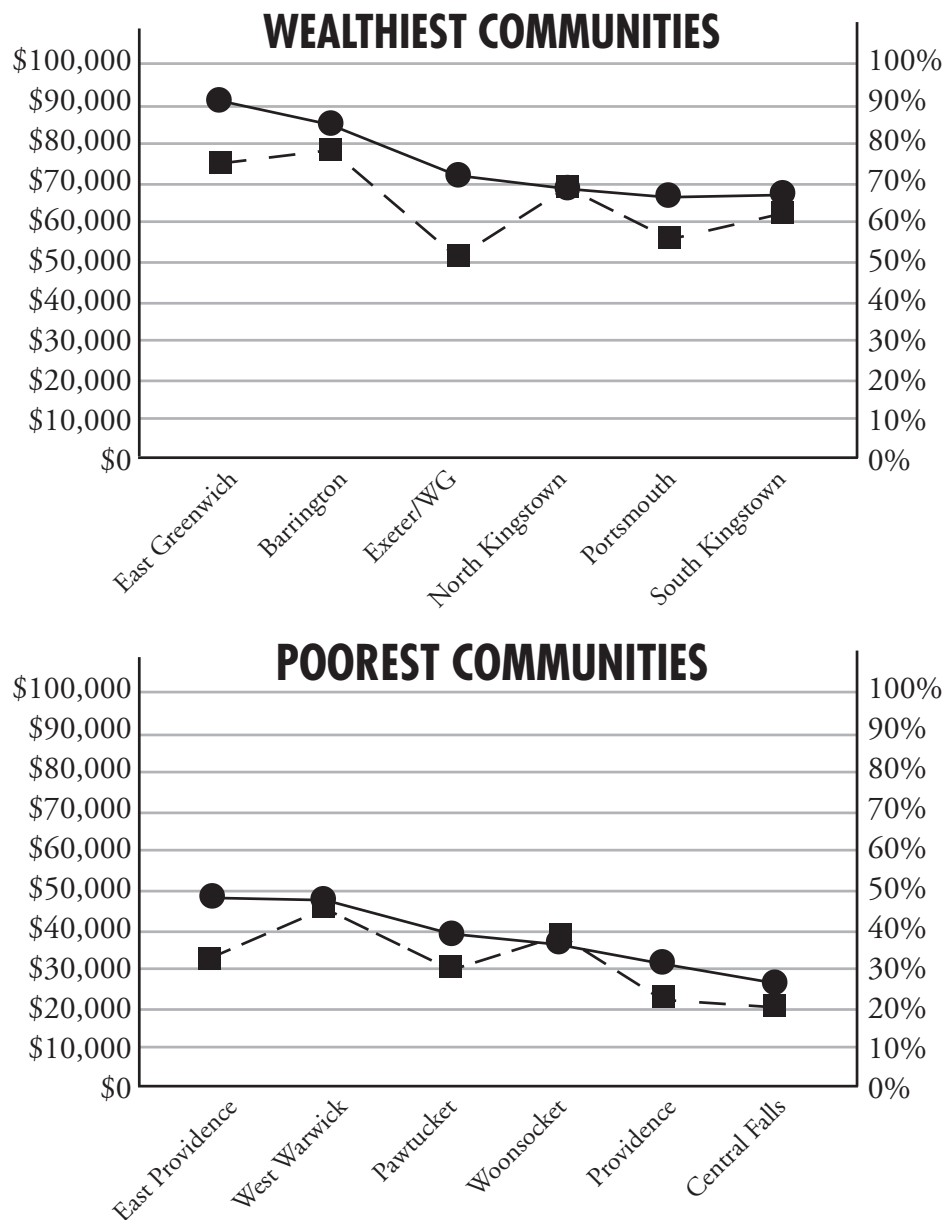


Figure 1.1: Grade 11 reading proficiency and district median income. With only a few exceptions, income is a very good predictor of proficiency. Data from RIDE (2005), after McWalters (2006).
(For a complete list of all Rhode Island cities and towns, please see Appendix A.)

Data linking poverty to poor preparation for school does not mean that poor children cannot be helped to overcome their disadvantages. It's a statement about the shape of the starting line, not a prediction of the finishing order. In determining the outcome of this race, the quality of the schools children attend makes a big difference. One study, by Card and Krueger (1992), found that 20% of the reduction in the black-white earnings gap between 1960 and 1980 was due to improvements in the quality of the schools attended by southern black children. That is, in the time period marked by the passage of the Civil Rights Act and the Voting Rights Act, the rise of affirmative action and the establishment of equal employment and other anti-discrimination regulations, the single greatest factor in the improvement of the economic circumstances of black Americans was the improvement of their schools.

This paper contains short summaries of relevant research on helping children who have not had the literacy-rich home life of many better-off children, through fighting poverty, early childhood education and early literacy work. The paper also contains suggestions about improving the effectiveness of all our schools, to the benefit of all Rhode Island's children. A review of the literature tells an attentive reader that no magic bullets exist. But it also tells us that there are

research-based answers available to many of the questions most often asked. These are programs and techniques in place in other states and other countries and that are working there. We don't have to reinvent the wheel, though we do have to eschew the magical thinking that claims we only have to expect schools to do better for them to miraculously do so.

The literature on schools and education is immense. This review can hardly do justice to more than a small fraction of what's available. In other words, the suggestions here are surely not sufficient to cure what ails the schools. But if one is to credit the vast quantity of research and analysis that has gone into them, it would be shortsighted indeed not to try them.

2. ECONOMIC FACTORS

THERE IS A STRONG link between poverty and a failure to thrive in an academic environment. Demographic studies of scholastic success show time and again that the economic status of a child's family is one of the two most important predictive factors (Denton et al., 2000).¹ Statistically, the link is stronger between economic status and cognitive outcomes than the one between economic status and behavior. Where it exists, bad behavior is more likely the symptom than the cause of low academic achievement in poor children. The link is associated both with the level of family income, and also to the stability of family income (Denton et al., 2000). More unstable incomes are also associated with poor parenting, which in turn is a cause of poor academic achievement (Yeung et al., 2002).

Though the link between poverty and poor educational outcomes is difficult to dispute, there is some disagreement about the causal path. That is, why does poverty affect education?

The research around the effects of poverty on cognitive or academic achievement fall into two major categories. In one, the causal link is posited to be the stress caused by poverty, while the other stresses the investments that a poor family cannot make on behalf of their child—in time, money or simply attention. This is not a case where one is

the correct answer; both approaches have their merits, and research into the two different models has produced complimentary results (Ryan et al., 2006).

The Family Stress Model emphasizes the effect of uncertain incomes, poor nutrition and inadequate housing (not to mention substance abuse or crime) on stress in a household. The stress in turn interferes with a child's cognitive development when parents ignore the child or engage in otherwise poor parenting practices (Snow et al., 1991; Ryan et al., 2006). There is substantial evidence that the effect of family stress on academic achievement is indirect. The stress produces behavioral problems in the child, which in turn affect academic achievement (Yeung et al., 2002).

But there are direct effects as well. (Hanushek et al. 2004) showed that among a sample of 200,000 children in Texas, poor children (eligible for reduced-price lunches) were almost twice as likely to switch schools as better-off children, and more than three times as likely to switch more than once. The same study showed that moving, in itself, is damaging to school performance of poor children, even when the move is made to a better school. The study also pointed out that moving is detrimental to the other children in a class that is disrupted. In other words, an unstable housing situation is bad for a poor child's schooling. Affordable housing is an educational asset.

¹The other important one is the educational level of the mother. See Section 2.1.

The Investment Model of poverty effects holds that the effect on children stems from the poor home environment. That is, poor children lack the books and toys that better-off children have, and the lack of such stimulation produces a lack of cognitive development. Proponents of the model also point out that parent time with their children is also in short supply in poor households. This is especially true in single parent households where the parent works a full week (Ryan et al., 2006). Some researchers show that as much as 50% of the differences in academic achievement scores between children in and out of poverty can be attributed to the quality of their home environments (Bradley, 1995; Korenman et al., 1995). Research on the mechanics of the effects supports a direct connection between family investment in the home environment and cognitive outcomes (Yeung et al., 2002).

2.1 PARENTAL EDUCATION

The other important demographic correlation with academic success is the level of parental (especially maternal) education. This correlation is well-known, and appears consistently in demographic studies where it is tested for (Denton et al., 2000, for example). The obvious implication is that focusing on the education of adults may pay off in the long run with the education of their children (see section 2.1). But psychologists have had much less success identifying how, exactly, educated mothers make a difference in their children's lives. Do educated parents read to their children? Help them with homework? Get involved? Though there are some reports of good correlations with these activities (Denton et al., 2000, for example), they are varied and not perfectly convincing (Snow et al., 1991; Korenman et al., 1995).

In an exhaustively documented study of a range of American families, Hart and Risley (1995) showed that by the time a middle-class child reached school age, he or she would have heard more than 30 million more words than a poor child of the same age. The researchers also counted the number of compliments and encouragements as well as the commands and insults, demonstrating that there is a significant gap in that area as well, and suggesting that parenting workshops may not be without effect on the academic achievement of low-income children.



Some researchers speculate that the apparent lack of correlation between parental educational achievement and home literacy activities, such as reading together, may be methodological. That is, many parents may tend to exaggerate the time they spend on these activities when asked about them by highly educated researchers. What, after all, would you say after it's become quite clear that the researchers interviewing you approve of reading to one's children? Related survey questions that cannot be exaggerated (e.g. "Who are your favorite authors?") show good correlation with student achievement. This implies both that the

correlation between maternal education and student achievement may not be a statistical artifact, and also that there are serious methodological traps surrounding the related survey research, since the findings are pretty much all self-reported (Snow et al., 1991, p. 69).

This implies that home literacy activities may be important to children's growth, despite the lack of correlations in the research literature. There is also ample evidence that the quality of maternal care has important cognitive consequences, and this may also be part of the correlation, since parent workshops and education can improve this as well (NICHD, 2002). One can say with confidence that an educated mother is more likely to have an educated child.

Adult Basic Education: Our state has already made it clear that adult literacy programs are an important part of its economic development policy. Research shows that it can also be called an important part of the state elementary education policy. The correlation between educated parents and educated children is beyond dispute (Denton et al., 2000, for example). There are debates about the details of the linkage (Snow et al., 1991), but the basic statement is clear enough that one can be unequivocal in saying that educated adults are more likely to produce children ready to learn.

The Rhode Island Economic Policy Council conducted a survey of adult literacy programs in Rhode Island. By a large margin, program directors identified staffing shortcomings as their biggest barrier to effective services (Titzel et al., 2004). Programs need both the resources to pay for staff, and the bodies to hire. Rhode Island has a substantial need. Census estimates are that there are more than 175,000 adults in Rhode Island who don't have a high school diploma or have limited

English proficiency. Right now, the various adult education programs in the state have the capacity to serve no more than 10,000 people per year, according to the EPC survey.

ADULT BASIC EDUCATION RECOMMENDATIONS

With research on early literacy so clearly pointing to the crucial value of educated parents, the state should:

- **Expand adult education funding through the Department of Education and the Human Resources Investment Council;**
- **Allow low-income parents who are working to use some of their subsidized child care for education;**
- **Allow Family Independence Program recipients to count some education toward their work requirement; and**
- **Enhance workplace literacy programs like those run by the Institute for Labor Studies and Research.**

2.2 WELFARE POLICY

Some factors in cognitive development make significant appearances in study after study. The educational attainment of the mother, in addition to the effect on the academic achievement of the child, is also an important part of keeping a child healthy and well fed. With research clearly indicating the countervailing effects of education and poverty, we must ensure that our public policies promote education. Good policy would

allow mothers to seek an education as part of their Family Independence Program (FIP) plan for independence. Insisting that mothers forego education in order to care for their children is a way to perpetuate poverty, not alleviate it.

The FIP program serves around 24,000 children in Rhode Island. Unfortunately, the cash benefit provided has not changed since 1989, and is now only \$554 a month for a family of three. After inflation, this represents a loss in value of 36% over 16 years, and leaves families that depend on it far below the poverty line. Families on FIP rely on once-a-year payments like clothing and weatherization allowances to make ends meet.

There is a significant amount of work that could be done to make it easier for people who qualify for state assistance to get it. The applications are confusing and extensive, the interview process intrusive and repetitive, and the program income limits often contradict one another. This is especially true for families that do not receive cash benefits. Many of these programs, such as subsidized child care, health insurance and food stamps, require independent application and interviews, and enrolling in the programs can require three or four half-day trips to downtown Providence or Cranston. These programs are designed to help people who are working, but near poverty, and are some of the most effective means of pulling children out of poverty, according to research by Ozawa (1995).

There are steps that Rhode Island can take to make it simpler to get the help the state offers, and not only would it help more people get the help they need, but it could save money on the administrative side. As of fiscal 2005, there were 153 people on the state payroll whose only job it is to help applicants for one or another social service fill out the application forms (Sgouros, 2004).

Child Support Pass-Through: One good way to increase the spending power of families on welfare would be to increase the child support pass-through. Right now, the maximum a mother can receive above her family's FIP stipend is \$50 each month. The purchasing power of the FIP benefit is far too low for a family to live on without some kind of help, and if a father is capable of more child support than \$50 per month, the children should be the ones who benefit from it. Where child support policy creates disincentives to family unity, the policy should be modified.

WELFARE RECOMMENDATIONS

Disruptive and inadequate home environments create children who aren't ready to learn. The state should:

- **Increase the clothing, weatherization allowances for FIP recipients;**
- **Increase the FIP cash benefit which has remained unchanged since 1989;**
- **Allow FIP recipients the flexibility to pursue their education; and**
- **Increase access to subsidized child care, including for low-income workers who want to use it to finish their education.**

2.3 WAGE POLICY

The research on child development is quite clear that children born into poverty will start school several steps behind children who aren't. The state has already acted to raise the minimum wage. The raise was years overdue, and the minimum wage has lost quite a bit of purchasing power since it

was first enacted. To avoid the long lags between minimum wage hikes in the future, the state should index the minimum wage to the cost of living.

Rhode Island is in the unenviable position of having an uneven distribution of wages between professional and blue-collar work. That is, wages for professional, white-collar jobs pay substantially higher relative to the national averages for those kinds of jobs, while the pay for blue-collar work is much lower. (See section 10.2.) Compared to Massachusetts and Connecticut, we pay our professionals about the same, or a little bit less, but we pay our blue-collar workers much less. It's often remarked that Rhode Island doesn't seem to have its "share" of wealthy taxpayers, but it also appears that through wage differentials like this one, we go out of our own way to make sure we have many poor ones. This contributes to the remarkable fact that the bulk of Rhode Islanders receiving some form of non-cash welfare benefit (food stamps, subsidized child care or health benefits) are employed.

The state does have some leverage over wages at the lower end of the scale. The impact comes by example, and the state should enact a policy that its departments—and its contractors—shall pay a "living wage" to their employees.

The Federal Earned Income Tax Credit, an income support program administered via the income tax, has become a powerful way to help alleviate the poverty of families with children. The federal EITC is a refundable tax credit, which means that if one's tax is less than the credit, one gets a refund. It amounts to a wage subsidy, which is of great help to families trying to make ends meet on a low-wage job.

The Rhode Island EITC is modeled on the federal EITC program, but the refunds a Rhode Island taxpayer would get are limited to a fairly nominal amount. There is evidence that this kind of assistance is quite important to the families who do manage to escape poverty, so it is a place where further investment would be likely to pay off (Ozawa, 1995).

ECONOMIC POLICY RECOMMENDATIONS

The research clearly points to the effects of poverty on education of children's cognitive development. The state should:

- **Index the minimum wage so it rises with inflation;**
- **Establish a statewide "living wage" policy for state employees and contractors; and**
- **Increase the amount of the state Earned Income Tax Credit that can be refunded.**

2.4 HOUSING

One of the effects that poverty has on a child's education is the displacement and disruption created by frequent changes of address. The disruption is bad for the child, and it's also bad for the child's classmates (Hanushek et al., 2004; Yeung et al., 2002). The remarkable real estate price inflation of the last five years has made the housing situation of the poor in Rhode Island as precarious as it's ever been in recent memory. The state's policy makers are aware of the need, but the response they propose—building more inexpensive apartments—is largely inadequate to the scale of the problem, though it certainly helps

those few people lucky enough to get one (Sgouros, 2006b; Sgouros, 2005b).

The state could also ensure the efficacy of the federal housing vouchers by acting to prohibit discrimination in housing against poor families who use them.

Rhode Island has a trust fund for funding city and town investments into affordable housing and open space. Unfortunately, though established in the early 1990's, the fund was never funded, and remains an empty promise fifteen years after its establishment. The state should act to create a funding mechanism via the real estate transfer tax to promote the creation of more affordable housing.



Housing speculation needlessly runs up prices in Rhode Island. Nationwide, between 10% and 25% of all real estate investment is speculative. Since the speculation is concentrated in the hot real estate markets, this translates to at least half a billion dollars a year, and probably far more in Rhode Island. Speculation is investment not meant

to provide housing, but only to provide profit via capital gains. This kind of behavior makes housing more expensive for everyone, and the effects are exactly the worst in the poor neighborhoods where one can find “bargains” (Sgouros, 2006b). Taxing the capital gains on real estate speculation as Vermont has done since 1971 could cool off this driver of high prices, while raising a significant amount of money for Rhode Island.

HOUSING RECOMMENDATIONS

Unstable home environments are one of the major causes of poor academic achievement in poor children. The state should:

- Prohibit discrimination in housing against poor families who use housing vouchers;
- Continue funding the Neighborhood Opportunities Program to build affordable housing;
- Issue a \$75 million Housing bond to make a major investment in affordable housing;
- Increase the realty transfer tax to support the state's Affordable Housing and Open Space Trust Fund; and
- Establish a progressive realty capital gains tax modeled after Vermont's to discourage real estate speculation.

3. HEALTH AND NUTRITION

ARAFT OF RESEARCH links poverty with poor health, especially among children. There are several ways in which poor health affects cognitive development, ranging from days of school missed to physical learning impairments. Poor children typically suffer from a different array of illnesses than middle-class children, including lead poisoning, vision problems, hearing problems, anemia, and more. Furthermore, poor children typically suffer more severe versions of these problems than others. The causes are presumably complex, and are not well understood, but the fact has been documented for years (Starfield, 1982; Denton et al., 2000; Egbuonu and Starfield, 1982). This may also be related to the investment model (section 2) of poverty influence. That is, poor parents are less likely to have access to the kinds of long-term preventive care that better-off parents have.

3.1 HEALTH

Rhode Island is among the most progressive states in the nation in providing health care to its poorest citizens. A smaller percentage of our state is uninsured than any other states except Minnesota, Hawaii and Wisconsin (DeNavas-Walt et al., 2005). But since the US is among the weakest in the industrial world on this measure, this is faint praise, and it still leaves thousands of children without coverage. The Governor's proposed budget for fiscal year 2007 contains significant cuts in access to medical care

for the poor.¹ The program should not be cut, and the premium paid by low-income workers who participate (RIte Share) should be capped at 2% of income, not increased, as the Governor proposes.

3.1.1 ASTHMA

Among chronic conditions, asthma is the leading reason for school absences (Baker et al., 2002) and it disproportionately affects city-dwellers, and the poor (Crain et al., 1994; Nicholas et al., 2005). Some studies show that absenteeism from asthma does not result in significant long-term academic consequences (Mendell and Heath, 2004; Silverstein et al., 2001), but studies that look at segments of the population do show evidence of important effects. For example, Bonilla et al. (2005) shows that asthma can have a disproportionately high impact on the youngest children, where absenteeism can have a more significant impact on general academic achievement (Bonilla et al., 2005). Also, the effects of absenteeism due to asthma may be much more significant on classroom conduct and on a student's grades than on the results of standardized tests. In other words, the effect may be crucial to the success of a child in school, while being less important to that child's academic ability (O'Neil et al., 1985).

Asthma and other respiratory conditions have long been known to be abetted by poor building

¹Including completely dropping care for undocumented immigrants, most of whom will seek their care at hospital emergency rooms, where it costs the state more.



conditions (Hoffman et al., 1993; Milton et al., 2000) especially dampness and inadequate ventilation (Nevalainen and Seuri, 2005; Seuri et al., 2000; Garrett et al., 1997). It has also been shown that exposures at school can be as significant as home exposures, despite the smaller amount of time that children spend in school (Smedje et al., 1997; Taskinen et al., 2002). Bad roofs, leaking heating equipment, blocked ventilation and leaking windows can all create these conditions. In other words, repairing roofs and HVAC equipment and proper maintenance of school buildings isn't just a maintenance issue; it's a health issue, and therefore an academic one.

Unfortunately, the skin and bones budgets of our urban schools have allowed many buildings to fall far behind in maintenance, and children routinely suffer in badly heated and badly ventilated rooms and with leaks in the ceilings and windows that promote an unhealthy environment for learning.

3.1.2 VISION

Several studies have shown that vision problems are more common in poor children than in middle-class children, and that remediation for the problems is not nearly as common (Starfield, 1982; Egbuonu and Starfield, 1982).

Recent work in poor schools in Boston and in Baltimore has suggested that undiagnosed vision problems in young children may be a major source of learning difficulties, and they occur with far higher frequency than in the general population. In Boston, 53% of the children tested failed some portion of a comprehensive vision assessment (Orfield et al., 2001). In Baltimore, with a smaller sample, almost 80% failed (Harris, 2001). Both studies found that the vision problems that some schools already screen for—predominantly myopia (nearsightedness) and amblyopia (lazy eye)—were a minority of the problems detected. The researchers reported surprisingly high levels of farsightedness and eye tracking, movement and focusing disorders, not all of which are correctable with glasses. The Boston study further showed that in-school vision therapy, including exercises and lenses, significantly improved academic achievement in children, though lack of participation by parents was a significant block to better results.

An earlier study of juvenile delinquents in Maryland found that 77% of 132 inmates of the juvenile justice system failed at least four tests in a ten-test comprehensive vision test, and all but two failed at least one (Harris, 1989). Another study compared 50 incarcerated juveniles with 54 graduate students to discover that tracking and convergence problems are statistically sound predictors of academic achievement (Johnson and Zaba, 1999).

The Harris (2001) and Orfield et al. (2001) studies both identified a far larger incidence of vision problems in special education classes, suggesting that vision may have been an undiagnosed contributory factor to the classification of those children. A child who can't learn to read may often be a child who simply can't see well. Remedies often include glasses, but also focusing and tracking exercises can be surprisingly helpful in putting slow learners back on track. These findings have been duplicated elsewhere (Gould and Gould, 2003, in Arizona, for example).

HEALTH RECOMMENDATIONS

Health problems can have serious impacts on children's ability to learn.

The state should:

- **Support school construction initiatives to rebuild schools to ensure children's health;**
- **Expand vision screening in schools to cover tracking, eye teaming and focusing problems as well as myopia and amblyopia; and**
- **Fully fund the RIte Care program, and limit the co-pay to 2% of a family's income.**



3.2 NUTRITION

Research continues to turn up ever-increasing numbers of links between nutrition and cognition. Under-nutrition has been linked with decreases in cognitive ability, but also with emotional problems that may produce attention deficits and other behavioral issues. The cognitive deficiencies have been well linked even to micro-nutrients, like vitamin A, iodine and iron. Anemia is especially pernicious, since it robs children of energy and leaves them at a higher risk of lead poisoning. Nationally, nearly a quarter of low-income children are anemic (Brown and Sherman, 1995).

A 1998 study found that hungry and at-risk for hunger children may be twice as likely to be classified as suffering from a learning disability (Murphy et al., 1998).

The positive relationship between good nutrition and cognitive capacity is most true in the lower grades, but is true in all grades (Pollitt, 1994). Furthermore, the effect is lifelong: the effects of poor nutrition in childhood may never be overcome (Li et al., 2003).

These effects are, of course, widely known. One recent study claimed that schools in Virginia were successfully “gaming” the state’s high-stakes school evaluation tests by adjusting the school lunch menus to provide more calories on test days. The principals in those schools apparently understood quite clearly the positive relationship between nutrition and academic performance. The study manages to demonstrate both that the menu manipulation was done—and that it worked (Figlio and Winicki, 2002).

Most of the nutrition programs in Rhode Island’s schools are federal programs, and the congressional budget knives have left their funding relatively unscathed. But the state could help improve the nutrition of our children with legislation to control the availability of sugary drinks and snacks in school that compete with the more nutritious menu choices. Furthermore, many schools earn significant amounts of money from vending machines. The pressure on school budgets over the past decade has erased many non-essential expenses deemed “frills,” and has made vending machine revenue more important than it ought to be. Principals should not be forced into the position of trading away the nutrition needs of their students for field trip money.

The federal food stamp program continues to feed a large proportion of the state’s poor. More people are eligible for the program than know about it, though, so the state’s outreach program provides a valuable service. The program is slated for a cut in the FY07 budget, but should be retained.

NUTRITION RECOMMENDATIONS

*Children who are not fed properly
cannot learn as well as children who are.*

The state should:

- **Continue the program of food stamp outreach to make sure that the people who need food help get it;**
- **Fully fund the Regent’s request for free and reduced price lunches; and**
- **Ban vending machines with soda and other too-sweet drinks and candy from schools.**

4. EARLY CHILDHOOD EDUCATION

THERE IS A WEALTH of data available to testify to the value of good pre-school experiences, especially for low-income children (Ryan et al., 2006; Brooks-Gunn et al., 2003). Some of the best data comes from the Perry Preschool Project, analyzed by researchers at the High/Scope Research Foundation (Parks, 2000). The Perry Preschool Project was a program in Ypsilanti, Michigan, that combined pre-kindergarten literacy education and high



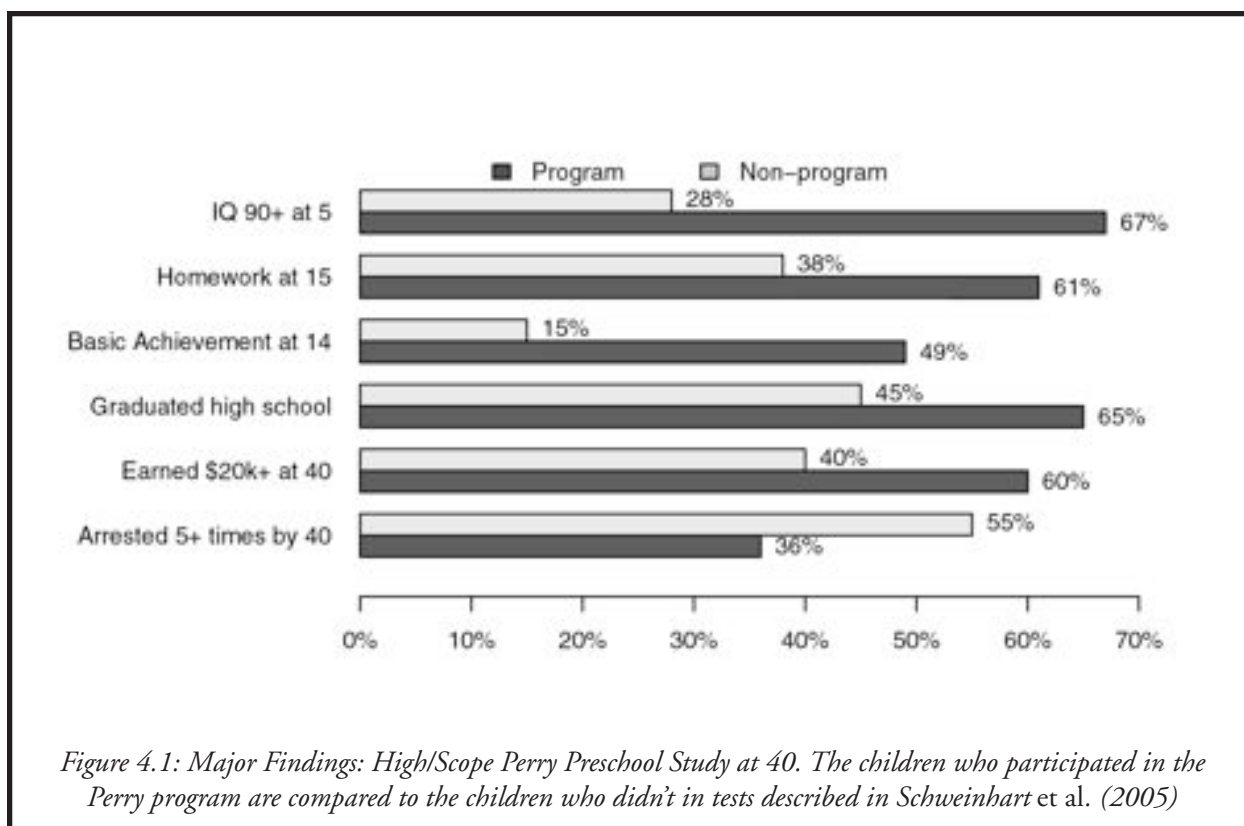
quality center-based child care with home visits for low-income families. The Perry Project advanced the language development of its children, which allowed them to adjust much more quickly to the demands of school. Early results appeared to indicate that the positive effects of this education had largely faded by around age 8,

but long-term follow-up and benefit-cost analyses have conclusively demonstrated the value of the Perry Program. At age 15, the participants scored higher on IQ and achievement tests than their non-program peers. Furthermore, they were half as likely to have spent any time classified as special education students, were more likely to graduate high school, more likely to have education after high school, less likely to have been pregnant in their teens, and so on. This study looked not just at the benefits to the individuals, but at the costs to society of the people who did not participate in the program, compared to the ones who did (Barnett, 1985). The conclusion:

The conclusion that one year of the Perry Program was a good investment for society is nearly unassailable. The conclusion that two years is a good investment is nearly as strong.

Another (later) benefit/cost analysis showed that 40% of the benefit in the High/Scope Perry Project was a reduction in criminal justice costs, another 28% was an increase in taxes based on the greater income of the Perry graduates, 25% was a reduction in the education services required by graduates (less special education) and 9% was the reduction in welfare costs. In total, these benefits alone were worth twice the investment (Karoly et al., 1998).¹

¹The authors point out that this did not count the benefits to crime victims avoided, which they estimated as larger than all the other positive effects combined.



The Perry Project wasn't the only such successful experiment. Programs with similar features have been established and studied in many different places. A review of the Perry Project, along with six other programs where similarly rigorous follow-up studies had been conducted was published by Schweinhart and Weikart (1985). The review included studies from Harlem, Wisconsin, Texas, Georgia and Tennessee, as well as the Perry Project in Michigan. Study populations ranged from a few dozen to over a thousand. The review found that serious long-term analyses showed the entire approach to be quite successful. Some of the programs covered had improved on the Perry model. The Milwaukee program included adult literacy and vocational education for the parents of the enrolled children, and the Harlem study provided some one-on-one tutoring sessions. The authors concluded about

elementary school achievement of children who had participated in pre-school programs:

In the studies we are reviewing, every single comparison of scholastic placement was favorable to the group that had received early childhood education. In four of the five studies that included data on special education placements, the rate of such placements was usually reduced by half.

Similar effects were found in the incidence of teen pregnancy, juvenile delinquency and high school graduation rates. Barnett (1995) made a review of 36 different programs, and came to essentially identical results: the effects are variable (as are the programs), but there is no mistaking the positive effects of early childhood education.

4.1 FADING

There is a great deal of variability in the results of studies of early childhood education, but the variability is in the quantification of the benefits (See Figure 4.2). About the benefits themselves, there can be little doubt.

There is a persistent criticism of early education programs that the effects fade too quickly to be worth the investment. A study found that the positive benefits of the Head Start program were essentially gone by third grade, when children were compared to their peers who hadn't participated in that program (Haskins, 1989; Consortium for Longitudinal Studies, 1983). In reference to programs like the Perry Project, these critics miss some essential points. First, Head Start is a program about socialization and school preparation. The Perry Project, the Abecedarian Project, the Rome Project and the rest are much more specifically about assisting the young child's language development. Second, all these programs involved substantially more intervention in a child's life, including home visits, or adult literacy education. Third, there is research to suggest that the children in whom this "fading" is observed are the ones who attend poor schools (Currie and Thomas, 2000). The implication is that early childhood education of whatever kind helps children achieve in school, and if it may not be enough by itself to overcome overcrowded classes and decrepit school facilities, that hardly counts as a knock against it (Ryan et al., 2006, p.336).

Another possible approach to the fading problem was shown by the Abecedarian Project, a program of very early intervention in North Carolina. This program covered children from infancy right up to kindergarten. Researchers were able to document considerable long-term effects on academic achievement, possibly due to the

long-term nature of the program (Campbell et al., 2001). Overall, despite the many differences among programs, a review of several of them put it this way:

These effects are large enough and persistent enough to make a meaningful difference in the lives of children from low-income families: for many children, preschool programs can mean the difference between failing and passing, regular or special education, staying out of trouble or becoming involved in crime and delinquency, dropping out or graduating from high school. (Barnett, 1995)

The state of Rhode Island is lightly involved in early childhood education. The Department of Education does run an office of Early Childhood Education. Most of its efforts are about professional development and accreditation for pre-school academic programs around the state, rather than providing service. But the sites where services are actually offered are in places like Jamestown, Portsmouth and Narragansett. Though the children in these programs no doubt gain substantial benefit from them, it's children in Central Falls and Pawtucket that need them the most, but it's there that funding problems prevent their establishment.

The state Department of Human Services also provides funds to CHILDSPAN, a project of Children's Friend and Service, to provide professional development and some materials to day-care centers and pre-school programs around the state. CHILDSPAN's efforts are more concentrated in the state's poor communities, but the efforts are focused on improving the care already provided, rather than providing new educational opportunities.

A limited amount of early childhood education is done by the Child Opportunity Zones (COZ)². They help families improve literacy at home and help children in school, but are not directly involved with pre-school children in a classroom setting. Most of the early childhood work they do is about assessment of issues and working with families.

Providing professional development and accreditation programs is a useful service, and will improve the quality of education provided at child-care centers. But the state could help more by ensuring that all three- and four-year-olds, particularly those in poverty, have access to quality early childhood education in the public schools. It will take time to increase the capacity of the schools to accommodate this kind of program, so in the interim it is possible to create a system that could be accessed by day-care centers who don't employ certified teachers. For example, a program that brings a roving master teacher a few times a week to child-care centers could help improve the quality of the programs there, and so better prepare the children there for academic success.

4.2 FULL DAY KINDERGARTEN

One can turn to academic research for support of the efficacy of full-day kindergarten (section 4), or one can look at a study done in Providence. In 1998, researchers at The Providence Plan looked at first-grade advancement rates in Providence, and made the observations recorded in Figure 4.2. They found that the rate of children not advancing to second grade was far higher in children who had only been in half-day programs the year before.

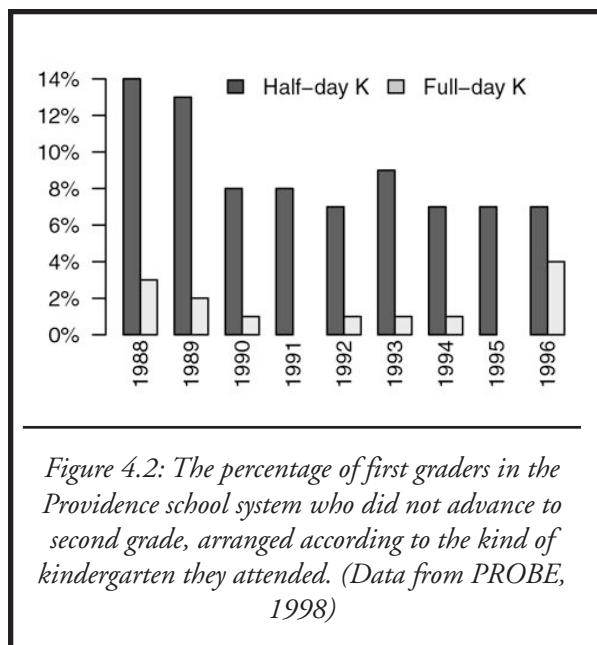


Figure 4.2: The percentage of first graders in the Providence school system who did not advance to second grade, arranged according to the kind of kindergarten they attended. (Data from PROBE, 1998)

It is now the stated policy of the state department of education to promote full-day kindergarten at Rhode Island's schools, but this policy has come with little additional money for school systems to enact such policies.

4.3 GOOD QUALITY CHILDCARE

In general, national research has shown that early day care can be a risk to children, since it is often not an optimal substitute for maternal care. But in the case of low-income children without optimal home environments, or with mothers who must work 35 hours a week to receive their FIP benefits, center-based day-care participation can improve cognitive outcomes significantly (Loeb et al., 2004; Caughy et al., 1994; Yeung et al., 2002).

The quality of non-family childcare has been shown to be important to cognitive development,

²For more information on Child Opportunity Zones (COZ) please refer to Section 5.1.

and to be improved by training and certification (NICHD, 2002). But nonprofessional home-based childcare is sometimes associated with behavioral issues such as aggression, and there is a positive correlation between social development and whether the caregivers themselves have progressed beyond high school, though cognitive outcomes seem similar (Loeb et al., 2004). A longitudinal study that followed children from 6 months to 3 years, found that the quality of the childcare staff was directly related to children's language skills. Girls, in particular, were sensitive to the caregiver's own education in their cognitive and language skill development (Burchinal et al., 2000).

The policy implication is that the state should continue to fund daycare certification programs and professional development resources to help improve the quality of care that our poorest children receive.

In Rhode Island, last year, over 13,000 children were enrolled in subsidized childcare. Over three-quarters of them (78%) were from families where the parents were working, and the rest were from families receiving public assistance. Ninety-three percent of the families using this service earned less than 150% of the federal poverty level, despite the high number of employed parents (Poverty Institute, 2006).

The Governor's budget proposes delaying an increase (again) in the childcare reimbursement rate for providers, and tightening eligibility for clients. This will have the effect of providing less care to children, and narrowing the options available to them, since some providers may choose not to take on subsidized clients due to the cut in rates. The providers who are available will be the ones who charge less than the available rate. These

may not be the childcare providers who will give children the stimulating, literacy-rich environment shown to improve child academic outcomes.

EARLY CHILDHOOD RECOMMENDATIONS

Given the importance of early childhood education. The state should:

- **Prevent cuts to Rhode Island's system of subsidized childcare. Enact previously scheduled rate increase for childcare providers (This has already been delayed by one year);**
- **Establish in-school early childhood education for three - and four-year-olds;**
- **While the schools are building the capacity to accommodate early education, experiment with ways to deliver programs to the target populations, such as the master teacher suggested in Section 4.1;**
- **Fully fund full-day kindergarten; and**
- **Establish state guidelines for childcare certification and professional development.**

5. LITERACY WORK

The research literature appears to support a couple of different forms of out-of-school programs to improve the literacy experiences of young children. Rhode Island is already engaged in some of this work, but funding is at risk for some of the important aspects.

5.1 CHILD OPPORTUNITY ZONES (COZ)

For poor and single-parent families, the research seems to support intensive home visiting programs that offer parenting and emotional support as a way to deal with some of the educational shortcomings of home life in those households (Brooks-Gunn et al., 2000; Yeung et al., 2002). The Child Opportunity Zones (COZ), an early literacy program working in ten Rhode Island school districts, approaches this model.

This program has been in existence for several years. Working in about two dozen Rhode Island schools, the program provides several different services to low-income students at those schools. The COZ's provide pre-school programs, including home visits to assess school readiness and to help parents improve literacy skills, as well as after-school homework clubs, parenting support groups, health and safety workshops for parents, referrals to adult education programs, and more. The COZ funds provide part of the salary for a coordinator at each site, and those coordinators have, over time, come up with substantial funding in the form of grants from the

federal government and the non-profit world, as well as support of their school committees. In other words, the funds spent on the program leverage quite a lot of other money.

Unfortunately, the COZ program has been subjected to dramatic trimming over the past few years. Funded at \$650,000 for ten centers just a few years ago, the program is down to \$400,000 for FY06, though there are still ten centers. Each program has already been cut. COZs are funded through a legislative grant, which are to be cut 25% in the FY07 budget proposal. The legislature hasn't decided yet whether the grants are to be cut across the board or individually, but this would be a significant blow to a program that leverages a substantial amount of outside money to provide exactly the kinds of services the educational literature suggests we should have. This is a program to be expanded, not chiseled into uselessness.

COZ RECOMMENDATIONS

Rhode Island's Child Opportunity Zone program is exactly the kind of early literacy work the research suggests we should be doing.

- The program has already been cut over the past few years. It should be expanded, not trimmed further.

6. SCHOOL EXPERIENCE

WITHOUT TOUCHING what goes on in the curriculum, there is a substantial body of literature to suggest that basic elements of school conditions are a major determinant of academic success. In other words, overcrowded and crumbling classrooms are not conducive to a good education. Besides, leaky roofs teach a lesson of their own, but not one we necessarily want impressionable minds to learn.

6.1 SCHOOL CLASS SIZE

Class size continues to be a controversial part of school reform proposals. But the trend lately seems to favor the point of view that class size matters, due to the increased attention each student can receive from their teacher.

Researchers at Princeton showed that reducing class size in the early grades could result in a dramatic narrowing of the achievement gap between black and white children. They further reported that almost all the narrowing of the gap since 1971 is attributable to historical trends in student-teacher ratios (Krueger and Whitmore, 2001).

Much data about small class sizes comes from Tennessee's Project STAR, where 11,600 elementary school students were randomly assigned to classes of different sizes. Follow-up research has shown that the effects of small class size, while modest, are durable, and follow a student through their career. Most interesting, it seems that small class sizes in the early grades



appears to be related to a dramatic narrowing of the racial gap between college applications. That is, students who had been in the small classes saw a 60% smaller gap between the number of black and white students taking college entrance exams (Krueger and Whitmore, 1999).

A 1989 review of class-size studies by researchers in California concluded that:

[R]educing class size was a substantial and cumulative effect on student learning. Students who would have graduated from high school at the 50th percentile in academic achievement could be expected to reach as high as the 66th percentile if class size were reduced by six students over their thirteen year career in the schools. (Mitchell et al., 1989)

It is often claimed that the research shows that reduced class sizes are only effective in the early grades, or that class size doesn't matter so long as the size of a class is between 20 and 40 children. Mitchell et al. (1989) shows that both these findings are the result of poor interpretation of the data available. Both Mitchell et al. (1989) and Averett and McLennan (2004), another extensive review of class-size literature, point out that reducing class size can be an expensive proposition. The former goes on to suggest many ways in which teachers of standard-size classes can take advantage of the research to improve their teaching practice, and other ways to reduce the cost of reducing class size. The latter points out that while most analyses focus strictly on academic achievement, there are substantial other benefits to children in smaller classes: better morale, better class control and so on. In other words, the available cost/benefit analyses tend to underestimate the benefits.

6.2 SCHOOL CONDITION

Studies that analyze the relationship between the conditions of a school and the academic achievement of the students in it are variable, but they agree on the essential points. When the correlation between the factors is significant, it is positive. Given the vague nature of rating a building's condition, compared to a mathematics test score, this is what one would expect to find in a causal relationship. A study by Cash (1993) of 300 schools all over Virginia found significant effects of building condition on academic achievement, especially reading scores. The findings were corroborated in separate studies in schools in Washington, DC (Berner, 1993), and



in 120 high schools in North Dakota (Earthman, 1995). The Cash study noted that the effects of poor building condition included distractions to students in the form of poor temperature regulation, and also questions of morale. This last was indicated by the fact that cosmetic factors seemed to be more significant correlates of poor achievement than structural or HVAC problems.

In a later and more detailed study of urban high schools in Virginia, Hines (1996) reproduced these findings. The effect of building condition on observed academic achievement was even greater here. The difference between poor and good conditions meant as much as 11 percentile points in academic achievement, after controlling for social and economic factors.

In a study of 300 Virginia public schools, Lanham (1999) found modest but still significant correlations between academic achievement and a variety of measures of school condition. He also found quite a strong negative correlation between the number of students in a school who qualify

for free and reduced-price lunches, and the condition of the school. In other words, the poorer the students, the poorer the condition of the school.

Another study of 139 schools in Milwaukee attempted to control for differences in race and poverty. These researchers found that the condition of the school physical plant was often significantly related to academic achievement, after controlling for such factors. The finding was not uniform, however, and some measures were significant in one year and not in another. But there were no negative correlations, and reading scores were always positively correlated. This study took another step, and attempted to control for student ability as well. When this was done, it appears that the condition of the school buildings was a better predictor of academic achievement than many social and economic variables, especially in reading (Lewis, 2001).

SCHOOL CONDITION RECOMMENDATIONS

*Crumbling and crowded classrooms
distract from the mission of the schools
and make the job of education harder.*

The state should:

- **Support school construction initiatives for improvements and deferred maintenance to school buildings in urban districts;**
- **Reduce class sizes, especially in the early grades; and**
- **Continue support for addressing working conditions such as building conditions and class size through local contract negotiations.**

7. PROFESSIONAL PRACTICE

WHAT HAPPENS in the classrooms in our state is perhaps almost as important as students' economic status in predicting their performance, but it is also among the hardest factors to research. Quantitative research is not as simple for issues of professional practice as it is for issues of poverty. It's easier to quantify the income of a child's family than it is to measure the professional achievement of a teacher. The subject of this section does not lend itself to convenient study, so the research literature is much more sparse than in other areas. Nonetheless, there are accounts of best practice available through on-going research, professional journals and conference proceedings that provide useful guidance to developing realistic policy, and their overall direction is relatively clear.

7.1 CURRICULUM

Rhode Island's school districts are quite variable in the resources they commit to researching and developing their curricula. According to the Department of Education In\$ite reports, dollar amounts range from \$0 in North Providence to \$423 per student in Providence. The majority of districts allocate less than \$100 per pupil to this function. Except for Providence and Newport, Rhode Island's urban core districts spend less than \$50 per pupil.

The state can provide several important services to the local districts that can help them develop and use modern curricula to help their teachers teach.

7.1.1 SAMPLE CURRICULA

The Rhode Island Department of Education (in cooperation with education departments in Vermont and New Hampshire) has spent substantial effort outlining sets of "Grade-Level Expectations" (GLE) for elementary and middle schools and "Grade-Span Expectations" (GSE) for high schools. These expectations are guidelines for student learning in English Language Arts and Mathematics at each grade level (grades 3-8 and grades 9-10 and 11-12 at the high school level. GLEs and GSEs are also being developed in Science. These expectations are intended to guide curriculum, instruction and assessment. This is important work, and Rhode Island should be commended for creating these guidelines. But the GLEs and GSEs will not be as useful as they could be without considerable investment in disseminating that work, through curriculum development, professional development, and simple promotion. This is how the state can assist district and school administrators and teachers to bring the GLEs and GSEs into daily instructional practice.

The GLE/GSE documents are couched in fairly general terms. For example, part of the science GSE says that the life science curriculum in middle schools should have as a goal that:

Students demonstrate understanding of biodiversity by giving examples of adaptation of behaviors that are specific to a niche (role) within an ecosystem (RIDE, 2006).

High school student life science classes should prepare students to:

...demonstrate an understanding of matter and energy flow in an ecosystem by explaining the energy transfer with cells in photosynthesis and cellular respiration, tracking ATP production and consumption (RIDE, 2006).

These are admirable goals, but identifying the materials and lessons necessary to get these concepts across to young minds is a substantial challenge for school districts. Especially, when those districts don't invest in curriculum development and have teachers that are already burdened with large class sizes. The state should develop sample curricula, and identify and design the professional development necessary to implement the curricula effectively. This work has already begun. In response to legislation introduced on behalf of the Rhode Island Federation of Health Professionals (RIFTHP) and passed by the General Assembly, the development of model statewide curricula for English Language Arts and Mathematics is underway and will soon be followed by Science. However, a substantial effort must be made to disseminate these curricula, keep them updated and to provide professional development and opportunities for practitioners to share teaching strategies. Curricula should also be developed in the remaining disciplines in the state's recommended 'Academic Core' (i.e. Social Studies, the Arts and Technology).

The state has invested substantial time and effort in creating specific sets of expectations. The reality, however, is that without substantial effort to promote the GLE/GSE expectations via curriculum and professional development—and to fund adequately those instructional support efforts—the work will stay on the shelf. Used to

design state assessments, but kept idle where they matter most - in the classroom.

Another valuable aspect to having sample curricula would be to help districts resist the narrowing of the curriculum that seems to be a by-product of the 'No Child Left Behind' act. NCLB has promoted an important emphasis on standards, but often that focus has been placed only on the areas tested by the state, at the expense of important disciplines such as Social Studies, Health, Foreign Languages and the Arts (see, e.g. Dillon, 2006). State assessments currently focus on Reading, Writing and Mathematics (soon to include Science) and there is a strong incentive for schools—especially “underperforming” schools—to abandon the broader curriculum and focus only on those areas assessed. Sample curricula in each of the core areas approved by the state, and available for local adoption, could be an important force in preventing this kind of tragic narrowing.

7.1.2 LIBRARY

Another way the state could assist local districts with their curriculum needs is simply to facilitate the sharing of materials between them. The state should establish a library at Rhode Island Department of Education (RIDE), containing sample curricula, standards-based lessons and assessments, and instructional strategies developed by local districts and teachers. Since many materials are prepared electronically, much of the library could be on-line. A district that had put effort into developing standards-based middle school science lessons, for example, could archive them in this library and make them available for other districts to use. Already, this concept is being incorporated into the model curricula being designed by RIDE, but it is important for the state to broaden this effort substantially by encouraging districts, schools, individual



teachers and teacher organizations to contribute to it.

A library like this could also include space for districts to record experiences with pre-packaged curricula from publishers, including recommendations and warnings.

CURRICULUM RECOMMENDATIONS

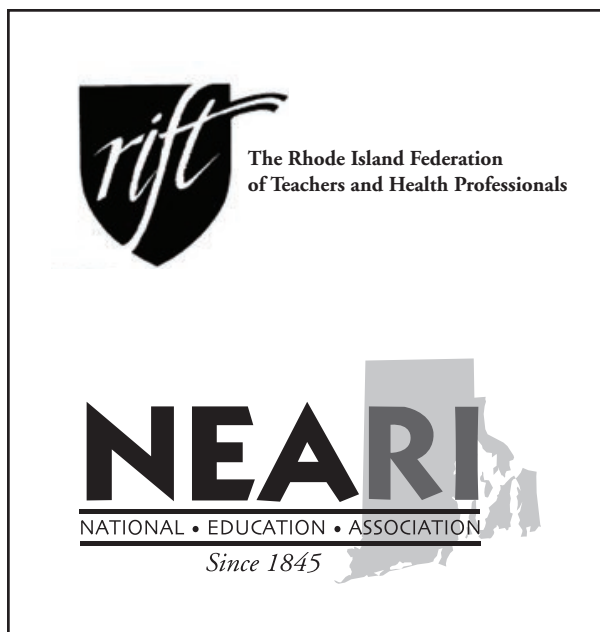
*What goes on in the classroom is as important as anything else in the school.
The state should:*

- **Create the sample science curriculum and move on to the other disciplines in the Academic Core: Social Studies, the Arts and Technology;**
- **Allocate the resources to vigorously promote the sample curricula; and**
- **Establish a library to help districts share curriculum investments with each other.**

7.2 PROFESSIONAL DEVELOPMENT

Like curriculum expenses, support for teacher professional development is quite variable among the towns in Rhode Island. North Kingstown spends over \$400 per pupil, while Foster spends about \$17. This is a cause for concern for two reasons. First is that the quality of teaching is obviously a major component of academic success. Very good statistical support for the claim comes from a study of data from the Harvard/UTD Texas Schools project. This study (Hanushek et al., 1998) found that variations in teacher quality is highly significant in explaining variations in academic achievement, and may be second only to the student family economic status as a determining factor. Sanders and Rivers (1996) found, in a student-level assessment of teachers and students in Tennessee, that teacher quality alone could be responsible for as much as a 50-percentile point difference in a student's academic achievement after three years. The same study showed that the effects of teacher quality are felt the most in the lowest-achieving students; the most effective teachers benefit the academic performance of all their students.

Once a teacher has been hired, professional development is among the most economical way to improve or maintain the level of instructional quality in a school, and may provide a better return on the dollar than many other school reform strategies (Greenwald et al., 1996a). Investment in curriculum, as well, is enhanced by the staff development that allows it to be implemented as designed (Guskey, 1994). But improving the skills and training of a particular faculty member is only part of the goal of modern professional development.



A second major benefit of professional development is in teacher retention. For example, the nation is undergoing a severe shortage in science teachers. But close examination of the problem shows that it isn't as much a problem of supply, as a problem of retention (NCTAF, 2003; Meyer and Barufaldi, 2003). New teachers leave. Science and mathematics teachers are especially prone to leaving (Ingersoll, 2002; Ingersoll, 2001), at least in part because most of them are well-qualified for decent jobs in the private sector. Special education teachers also show high rates of attrition. Surveys show that a major reason for people leaving the profession is a lack of support for teaching and isolation from one's peers and the school administration. High quality professional development includes opportunities to strengthen teachers' content knowledge and practice and, as importantly, creates opportunities for collaboration and mutual support among teachers in a school. Such professional development opportunities are also tailor made for combating the issues known to lead to higher rates of teacher attrition (Hancock, 1998).

Unfortunately, there is a wide variety of activities that fall under the name of professional development, and not all of them are equally useful. Single-day workshops, for example, are not nearly as effective as sustained programs, and models that emphasize integrated curricula and collaboration among teachers are much more effective than a series of lectures (Birman et al., 2000). The simple opportunity for collaboration and sharing of best practices among teachers at a school can sometimes be even more effective than that, and can foster the mutual support that reduces teacher attrition (Reitzug, 2002).

Effective, in-depth professional development can be expensive and districts and schools should take steps to ensure that professional development funds are focused on building capacity as well as individual expertise. Fostering opportunities for groups of teachers to work together and establishing processes for sharing information gained through professional development experiences can be the most effective means for knowledge to be shared widely among the teachers in a particular school or district (Stevens, 1999; Garet et al., 1999). The goal of the best practices is to create schools where the staff is collectively as ready to learn as the students, and where the development becomes institutionalized and accessible without special programs (Loucks-Horsley et al., 2003).

For policy makers and school administrators, the lessons of the research are fairly clear: professional development is one of the least expensive ways to improve the quality of one's teaching staff, and to create schools that can accommodate changes in curriculum over time. This makes the desultory support for professional development in some Rhode Island districts a cause for concern. As one researcher put it in a review of research:

“Professional development should be viewed as an on-going part of the daily life of the school...State laws mandating schools’ curriculum content and school time and governing school financing should be revised to accommodate more extensive and sophisticated professional development efforts” (Reitzug, 2002, p251).



In other words, it is important for all of Rhode Island’s school districts to recognize that professional development is a crucial part of the mix in producing good academic outcomes.

Professional development represents a large market for academic publishers and educators, and there are a tremendous number of programs available to schools. In Rhode Island, the Department of Education has some established guidelines for professional development, but these are not routinely followed. Professional development can be a valuable tool for improving the quality of instruction, but it does represent an investment of school resources. To be worth the

time, it must be ongoing, high-quality, and—most important—it must answer the needs of the teachers and the children in the school. An excellent professional development program about teaching math will not be the most helpful at a school whose students are proficient in math but haven’t achieved proficiency in reading. The agenda for these programs must be set by the people who are in the best position to evaluate the needs of the teachers in a given school.

Substantial funds are used for professional development and, since 1997 and the introduction of Article 31¹, the state has provided guidance on the focused use of these funds, their distribution and the representatives involved in planning the professional development supported by the funds. In addition to the guidelines the state promulgates, the state should require accountability for the funds expended. As with the recommendation for a curriculum library above, the state should provide a central repository for district and local professional development plans, information about effective professional development programs, providers and strategies as well as sample evaluations. Such a repository could also contain sample contract language from districts such as Coventry, Cranston, Johnston and West Warwick who have negotiated language establishing Professional Development Institutes/Centers and other agreements regarding the delivery of and participation in professional development. In addition to providing much needed oversight, such a repository could provide a valuable resource for school districts across the state.

¹The Rhode Island Student Investment Initiative (Rhode Island General Laws 16-7.1) is informally known as *Article 31*. It provides for increased state oversight on certain local education expenses made with state funds.

Good professional development does not have to follow a single format or be delivered by traveling consultants. There are excellent providers locally, and districts and schools can benefit from the work of many potential local partners such as the RI Department of Education, Rhode Island College, Providence College, the University of Rhode Island, the various Education Collaboratives and the RI Federation of Teachers & Health Professionals. Each provides professional development programs, as do many individual experts, including local practitioners, within the state. Professional development plans should be developed and implemented in conjunction with partners such as these.

There is no good one-size-fits-all approach to delivering professional development. In addition to workshops, courses, and study groups, a number of Rhode Island districts use professional development funds for coaches who work directly with teachers in their classrooms or in planning groups to coach them on new instructional methods or to support the implementation of new curricula or new instructional programs. When combined with other high quality professional development opportunities, effective coaching can be one way to make professional development an on-going part of the support provided to a districts' teachers, administrators and support staff.

In summary, the state of RI, local school districts and schools should develop and implement comprehensive professional development plans that are data-driven and research-based, linked to state, district and school priorities and responsive to the needs of teachers, administrators, support staff and students. The plans should be collaboratively designed by administration and teacher representatives, as well as providers. Professional development should be on-going,

include multiple avenues for learning, sharing and applying and be supported with appropriate funding and technical assistance. Professional development should be regularly evaluated for effectiveness and impact on professional practice, school improvement and student achievement.

PROFESSIONAL DEVELOPMENT RECOMMENDATIONS

High-quality professional development is one of the most economical ways to improve the quality of education in a school.
The state should:

- Increase its oversight of professional development and the expense of Article 31 funds for the purpose;
- Promote the development of high-quality, research-based professional development programs in districts around the state, with the aim of making them a permanent and uncontroversial part of local school districts' program; and
- Establish a library, in conjunction with the curriculum effort noted above, to permit local districts to share programs they have developed, as well as information about programs they have purchased.

7.3 UNIONS

There is a range of academic research on the value of unions in schools. Much of the research tries to make state-level comparisons, and has been largely discredited. Unfortunately, for those researchers, the differences between union-friendly and union-hostile states, say between Rhode Island and North Carolina, for example, are far too complex to be usefully encapsulated by a single union/non-union variable, but that was essentially the route taken by studies like Peltzman (1996) and Kurth (1988).²

There has been good quantitative research done that looked at the school level, instead of the state level. The most extensive review of the effects of unions in education was done by Eberts and Stone (1987). Using math and verbal achievement scores as their measure, their research demonstrated that unionized schools perform significantly better overall than their non-union counterparts, even after discounting such effects as class size and teacher experience. These findings have been replicated by others, including Milkman (1997) and Argys and Rees (1995).

Though they've been replicated enough to have confidence in the overall picture, there is not yet a good explanation for these findings. One fairly comprehensive analysis, Zigarelli (1994), found that the main productivity effect is due to organizational differences between union and non-union schools. School management in union schools were shown to be more efficient and to have a tighter linkage between management goals and classroom practices. Communication of goals and practices was found to be easier in union schools, and implementation of new practices



more effective. This essentially corroborates the findings of Eberts and Stone, who found that union schools increased the productivity of the school leadership. Zigarelli also points out that the political activities of unions, such as promoting increases in funding to schools, can be a significant part of the effect.

Some researchers have speculated that the productivity improvement of union schools is due to increased standardization. As unions facilitate communication around the school, instruction practice tends to gravitate to the best practices. This is a well-known effect of unionization in other workplaces, so some labor researchers suspect this may play a role in schools, too (Carini, 2002).

This could explain a secondary effect of unions in schools. Though it's clear that overall, union schools have a significant positive effect on educational achievement, the effects for students at the very top and bottom ends of the ability distribution are more equivocal. Eberts and Stone originally uncovered this effect, but these findings, too, have been replicated. Milkman, for example, found that unionization boosted minority

²Please refer to Carini, 2002, for a summary.

achievement substantially, in schools where minorities made up the majority of children, though the effect wasn't as pronounced, and sometimes slightly negative, on minority children in schools where the majority of children are not minorities. Argys and Rees speculated that these studies, which attempt to estimate "productivity" coefficients, are somehow biased by the quantification of variables like class characteristics, such as size and overall student achievement, but that research still replicated the basic findings. Sanders and Rivers (1996) points out that the positive effects of good professional development are the greatest on the students at the margins, another reason to promote widespread, effective development work.

8. OUT OF SCHOOL TIME

MANY STUDIES have been undertaken about educational programs taking place out of school time. These include after-school programs, summer programs, one-on-one tutoring programs and much more. Lauer et al. (2004) presents a review of dozens of such studies, and attempts to tease out the common threads of the reported successes. To the surprise of few, these seem to be consistency and duration. The effective programs are the ones that are always there and last a long time. They also report that the effects of such programs are more pronounced in lower-income populations of children (Also see Clark, 2002).

8.1 FUNDING AFTER-SCHOOL

The state currently administers \$4.8 million in federal funds from the 21st Century program. This money is dispensed via competitive grants, and in the last round was only able to fund a quarter of the applications received. Anecdotal evidence shows that many more schools would have applied had there been more money available. The money that was allocated goes to 15 different after-school programs, serving 5500 children in about 30 schools. This is a welcome development, though small. But one troubling aspect is that the grants are to end soon, so that another round can be awarded. This means that programs that have been established over the past few years are suddenly in jeopardy of evaporating, not because they aren't valuable programs, but simply because their funding cycle is up.



In addition to this federal money, there is a smattering of other funds. For example, there is about \$250,000 in formula aid to Providence, Pawtucket, Woonsocket and West Warwick to fund after-school activities.

In a fairly promising development, some private organizations, like the Providence After School Alliance (PASA), have raised considerable foundation and corporate money to fund after school programs in Providence. PASA's focus is mostly on middle school, however, and programming for older students is crucial as well. There are also many non-profit organizations that provide after-school programming, such as sports groups like the Y's or arts organizations like Everett Dance Theatre, Urban Arts, Community MusicWorks and AS220. The small scale of some

of these programs makes it difficult to scale them up, but they serve an important need. Programs like these—in Providence and everywhere else—will be the most effective to the extent that they can create a long-term institutional presence to serve the populations they’re aimed at. To the extent possible, school department policies and state policies should be aimed at supporting and institutionalizing these programs.

OUT-OF-SCHOOL TIME RECOMMENDATIONS

After-school programming and activities are an important part of the day for many children. The state should:

- Support efforts like PASA to establish long-term supports to after-school programming in school districts; and
- Strengthen the many non-profits who provide after-school programming.

9. CURRENTLY FAVORED POLICIES

THERE ARE A SET of policies favored by policy makers in Rhode Island. Charter schools, school choice, accountability and high-stakes testing are all part of the package of reforms promoted by the Governor, as well as many others. There is research available on these topics, too.

9.1 CHARTER SCHOOLS

One of the by-products of the ‘No Child Left Behind’ act was enhanced incentives to all schools to participate in the National Assessment of Educational Progress (NAEP) tests, also known as the ‘Nation’s Report Card.’ What this has meant for education researchers is a tremendous amount of new data with which one can compare public schools to private ones. In the past, it wasn’t possible to make good comparisons since, once one had controlled for population diversity, there wasn’t enough data left to make valid comparisons. In other words, once you had statistically adjusted the private school population to be comparable in racial makeup to the public schools, there were too few students in the sample.

With ‘No Child Left Behind’ this has changed. Using the NAEP math tests, researchers at the University of Illinois found that once you control for the effects of race and poverty, public schools do an equivalent job of education to private and parochial schools.¹ What’s more, where there are significant differences, the performance of public

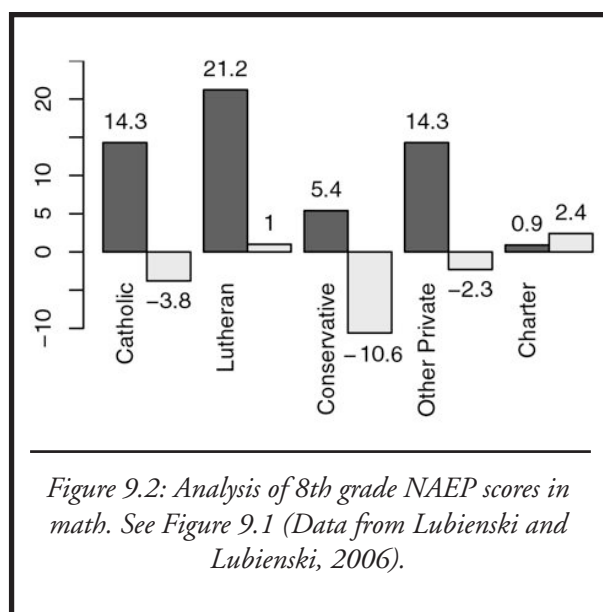
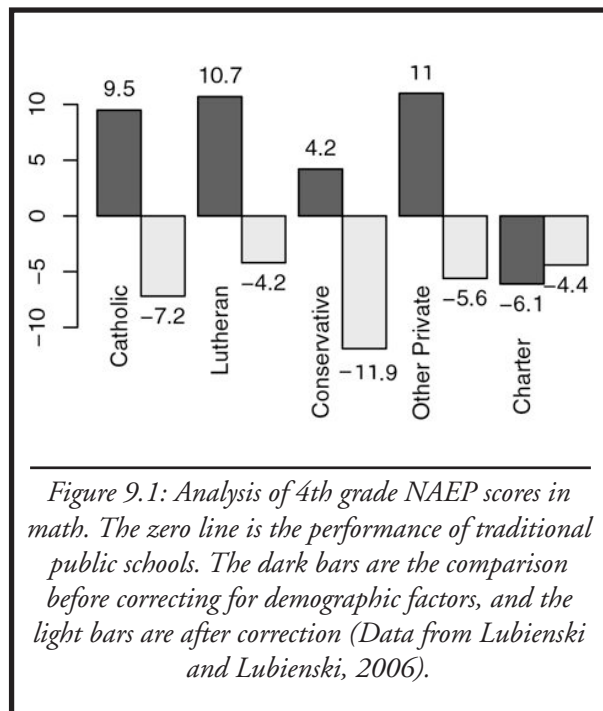
schools is often superior. Traditional public schools also fared as well or better than charter schools in the study (Lubienski and Lubienski, 2006). In other words, American public schools—properly run and funded—have done a remarkable job at educating our children over time.

Rhode Island’s experience with charter schools is not lengthy. The state currently has eleven charter schools. According to the state assessments, two of them (in Providence) are “high-performing” schools. But there is nothing so stellar about the others. In fact, of the rest, only three even rate as highly as “moderately-performing and sustaining,” and two of those are far from the urban core, in South Kingstown. In other words, the charter school approach produces results that, like the traditional public schools, range from excellent to not-so-excellent. There is no magic in the concept, the results come from good management, good teachers, hard work and application of what we know works—just like in the traditional public schools.

9.2 SCHOOL CHOICE

School choice, allowing parents and students to choose among several alternative schools, or allowing them to opt out of failing schools, is a popular educational reform. Unfortunately, the evidence is thin that this kind of reform has positive effects. One problem is that they are largely based on a simplistic version of the motivations and incentives of students and their parents. In systems where families are allowed to

¹Please refer to Figures 9.1 and 9.2.



leave failing schools, around 97% of students choose to stay in ‘failing’ schools (Bell, 2005). This may be a rational choice, after all, since some research suggests that switching schools may involve a cost to student performance, even when the switch is made to a “better” school. The evidence also implies that the costs of switching schools were highest among the lower income and minority students who attended much higher turnover schools (Hanushek et al., 2004). People do not shop for a school like they do for shoes, and rather than blame people for being short-sighted, economists need to understand the motivations of the people whose behavior they seek to analyze.

A statistical look at school choice and student outcomes in Chicago was similarly pessimistic about the value of the choice policy in improving students’ academic achievement (Cullen et al., 2003). This study’s findings, summarized in Levitt and Dubner (2005), were that the body of students who entered the lottery achieved more than their peers, whether the lottery allowed them to go to the school of their choice or not. The implication is that the students who exercise their choice are the ones who will achieve, rather than just the students who get their choice. This may be because of home pressures (which might be corroborated by the experience of Berner (1993), who noted the correlation between parent involvement and academic achievement in DC) or a student’s internal drive, but either way, it’s hard to see the school choice policy as having any real effect.

9.3 ACCOUNTABILITY

One difficulty with school accountability measures is that between-school variance among students is typically much smaller than within-school measures. One study found that overall school size was a greater determinant in school improvement (or decline) than any curricular factors and, that random variation is a much more important factor than is typically thought (Kane and Staiger, 2002). This means, for example, that a small school is far more likely to appear on a list of “troubled” institutions than a large school, though the problems may be the same. It also means that one-year changes in scores may mean nothing at all, since the random variations from year to year are likely to be much larger than tiny incremental achievement gains.

A similar effect is also possible for the state of Rhode Island. The sampling strategy used to allow the NAEP tests to be used for interstate comparisons is not feasible in Rhode Island due to the comparatively small number of middle schools in the state. The effect of this irregularity is not obvious, but it will result in somewhat more volatility in the results (Allen et al., 1996, pp. 48ff.).

10. COMPARISONS WITH OTHER STATES

IN ANY DISCUSSION of improving education in Rhode Island, the issue of the cost of education inevitably must come up. There are two issues about costs: who pays and how much?

10.1 LOCAL COST SHARING

Forty-six states provide a greater proportion of K-12 education costs to their cities, towns and counties than Rhode Island does to its towns.¹ In twenty-nine states, more than half the cost is borne by the state. In absolute dollar amounts, only 7 states ask more from their local communities than RI does, and only 8 states offer less (NEA, 2005).

The proportion of state to local support is important because state taxes, like the income tax and sales tax, tend to be at least a bit more progressive than the property tax that is the basis of local government finance in America. The result of the reliance on the property tax is that in rich towns and poor ones, the burden of funding education falls more heavily on the poor in Rhode Island than in almost any other state. A poor person in Rhode Island pays more for education, as a percentage of their income, than anyone else.

Poor people who live in the poorer cities and towns have it even worse. We fund education in Rhode Island by taxing most the people who can least afford it. Is there any wonder there is so much pressure on local school budgets?

In order to bring Rhode Island into line with other states, relieve the pressure on local school budgets, provide property tax relief where needed, and to ensure the provision of adequate and equal educational opportunity for students, the State should adopt a school funding formula that provides for adequacy and equity and that recognizes effort and ability to pay.

COST SHARING RECOMMENDATIONS

To address the inequities in funding education in Rhode Island, the state must adopt a funding formula—and mechanism—that guarantees equity and adequacy of education funding to all of our state's schools.

10.2 WAGES

Table 10.1 shows Rhode Island's low level of state financing for local education. But when those few dollars are combined with the local and federal funds, it turns out that the expenditures overall are relatively high. At an average cost of \$10,641 per student, Rhode Island's per-pupil costs are the ninth highest in the nation (NEA, 2005). This is high, but it's lower than all the New England states except New Hampshire. Part of the issue is that the northeast is simply an expensive place to live: energy costs are high here, as are housing costs and food. The Bureau of Labor Statistics (BLS) estimates that—on average—the cost of

¹Please refer to Table 10.1 for the National rankings.

living in the Northeast is higher than the rest of the country by 5-10%.

Another factor contributes to Rhode Island's education costs appearing to be egregiously higher than other states: the distribution of wages.

The subject of teacher compensation regularly comes up in discussions about education costs in Rhode Island. It is true that Rhode Island's teachers are paid well, after years on the job. The median salary for teachers in Rhode Island is around the eighth highest in the country. Furthermore, it is also true that the mean level of Rhode Island's wages is much lower. According to the 2003 American Community Survey of the Census Bureau, Rhode Island has the 13th highest median family income among states, much lower than Connecticut (3) or Massachusetts (5). According to the BLS, Rhode Island's mean wage is 19th in the country, far behind Connecticut (1) or Massachusetts (4).

But what these statistics omit is that the same disparity occurs for many other professions. Though the underlying reasons are not perfectly clear, professional jobs in Rhode Island pay salaries competitive with salaries in our neighboring states, while blue-collar jobs pay far less. Table 10.2 compares state mean salaries for several professional occupations (not teacher, but veterinarian, psychologist, accountant, architect, and so on) with the mean for several blue-collar jobs (cashier, carpenter, hairdresser, butcher, etc.). In one list, Rhode Island ranks 8th in the nation, slightly behind our neighbors, but in the same league. In the other list, the one ranking blue-collar wages, we drop to 23rd. The only other states that skew this direction are California and the states of the South. Other states skew the other way, or not at all. This is a disparity that has nothing to do with government, since these are predominantly private-sector jobs. In other words,

	<i>State</i>	<i>State Share</i>	<i>Local Share</i>	<i>Ratio Share</i>
1	HI	\$10,639	\$281	97.4%
2	VT	11,199	799	93.3%
3	NM	6,482	1,139	85.0%
4	MN	7,242	2,465	74.6%
5	AK	6,235	2,349	72.6%
6	NC	4,739	1,844	71.9%
7	CA	6,438	2,572	71.4%
8	DE	7,507	3,212	70.0%
9	MI	7,495	3,362	69.0%
10	WA	5,472	2,496	68.6%
11	WV	5,971	2,901	67.3%
12	ID	4,016	2,030	66.4%
13	KY	5,012	2,544	66.3%
14	AL	4,295	2,306	65.0%
15	MS	4,022	2,282	63.7%
16	UT	3,700	2,107	63.7%
17	OK	3,877	2,403	61.7%
18	AS	4,247	3,019	58.4%
19	KS	4,910	3,644	57.3%
20	WY	6,202	4,705	56.8%
21	LA	4,039	3,140	56.2%
22	WI	5,577	4,415	55.8%
23	AZ	3,909	3,128	55.5%
24	NH	5,365	4,338	55.2%
25	OR	4,436	3,683	54.6%
26	IN	5,020	4,282	53.9%
27	MT	4,147	3,584	53.6%
28	TN	3,285	3,017	52.1%
29	SC	4,256	4,152	50.6%
30	IA	4,194	4,213	49.8%
31	GA	4,290	4,337	49.7%
32	OH	4,907	5,096	49.0%
33	NY	6,343	6,733	48.5%
34	FL	3,720	4,060	47.8%
35	CO	3,780	4,337	46.5%
36	ME	4,521	5,514	45.0%
37	MA	5,213	6,690	43.7%
38	TX	3,046	4,180	42.1%
39	CT	5,218	7,280	41.7%
40	ND	3,075	4,303	41.6%
41	VA	3,754	5,363	41.1%
42	SD	2,952	4,220	41.1%
43	NE	3,102	4,498	40.8%
44	MD	4,085	6,079	40.1%
45	NJ	5,254	8,222	38.9%
46	PA	3,926	6,192	38.8%
47	RI	3,507	5,723	37.9%
48	MO	3,015	5,449	35.6%
49	NV	2,610	5,024	34.1%
50	IL	2,784	5,930	31.9%

Table 10.1: Per-capita state and local spending. The ratio column shows the proportion of the total that comes from state funds. Note that several states, such as New Hampshire, have statewide property taxes, so one cannot use this information to make judgments about the relative weight of property taxes (Data source: NEA, 2005).

school committees who are criticized for their decisions about teacher pay are making essentially the same decisions that thousands of private employers have made about hiring accountants, psychologists and architects (Sgouros, 2005a).

It is suggestive that Massachusetts and Connecticut do not have the disparity between professional and blue-collar jobs that Rhode Island does. Table 10.2 shows that Connecticut ranks third in the country in professional pay by this measure, but it also ranks third in blue-collar pay. For Massachusetts, the ranks are 4 and 5, respectively. In other words, the average wage in Rhode Island is a number that means something very different than the average in both of these two states.

10.3 DEMOGRAPHICS

Rhode Island is more urban than almost all other states. According to the 2000 Census, only New Jersey has a higher population density. Of the five highest density states in the country, four of them are also among the five richest states (measured by median household or family income). Rhode Island is considerably lower, coming in at 13th in household income and 11th in family income. New York, the sixth most dense state, has 40% as many people per square mile as Rhode Island, and 27 states have population densities less than 10% of the Rhode Island mark.

These statistics suggest that Rhode Island may have the same problems of the more urban states, without proportionally as many resources to call on in order to deal with those problems. There may not be any place as dense as Brooklyn in Rhode Island, but there isn't as much in the way of Westchesters, either.

What's more, not all our Westchesters are in our state. Through an accident of geography, the

<i>Professionals</i>			<i>Blue-Collar</i>	
1	NJ	64,053	HI	33,363
2	CA	62,851	NJ	31,976
3	CT	61,435	CT	31,310
4	MA	61,282	AK	31,191
5	DC	60,176	MA	30,045
6	MD	60,074	WA	29,357
7	NV	60,060	IL	29,168
8	RI	59,720	DE	29,094
9	AK	59,492	DC	29,004
10	NY	59,198	NV	28,868
11	MI	58,588	CA	28,705
12	DE	56,932	NY	28,516
13	IL	55,684	PA	27,711
14	AZ	55,680	OR	27,560
15	VA	55,358	MI	27,369
16	GA	55,323	MN	26,989
17	HI	55,231	CO	26,900
18	CO	55,141	MD	26,848
19	NC	54,849	IN	26,777
20	TX	54,734	OH	26,724
21	OR	54,552	NH	26,406
22	PA	54,415	MO	26,152
23	TN	54,110	RI	25,994
24	WA	54,105	VA	25,913
25	MN	54,096	WI	25,903
26	WV	53,906	KS	25,728
27	OH	53,878	AZ	25,445
28	WI	53,769	TN	25,396
29	FL	53,269	IA	25,294
30	IN	52,910	GA	25,153
31	MO	52,649	WY	24,968
32	NH	52,622	VT	24,708
33	UT	52,536	NE	24,635
34	ID	52,128	ID	24,611
35	MS	51,840	SC	24,333
36	AL	51,311	UT	24,299
37	ME	51,104	MT	24,161
38	SD	50,725	ME	24,075
39	AR	50,489	LA	24,004
40	LA	49,971	NC	23,983
41	WY	49,790	KY	23,967
42	VT	49,734	SD	23,850
43	SC	49,478	ND	23,841
44	NM	49,132	OK	23,753
45	KY	48,838	TX	23,502
46	IA	48,564	FL	23,466
47	OK	48,361	WV	23,353
48	ND	48,171	NM	22,634
49	NE	48,039	AR	22,562
50	KS	47,308	AL	22,428
51	MT	46,128	MS	22,097

Table 10.3: Professional salaries vs. blue-collar salaries: Notice how consistent the salary rank is for New Jersey, Connecticut and Massachusetts. Compare this to states like Hawaii, Washington and Iowa on the one hand, and Texas, Mississippi and Rhode Island on the other (Table reproduced from Sgouros, 2005a).



Providence metro area (as well as Westerly's) spills over into our neighboring state. Rehoboth and Seekonk are two affluent communities in Massachusetts: suburbs that rotate in Providence's orbit. Much has been made recently of a statistic derived from IRS data. In the 2004 tax year, 3.06% of Massachusetts taxpayers report adjusted gross incomes of over \$200,000 per year, while only 1.86% of Rhode Island taxpayers do.

The inference they draw is that state tax policy chases away the wealthy, and that if we should choose to emulate Massachusetts's tax structure, we'd have more wealthy citizens of our own. But is there another explanation? Well, it's also true that the wealthy tend to gravitate to the suburbs, and Rhode Island simply doesn't contain all of Providence's suburbs. In other words, some of the missing wealthy are presumably living in Seekonk. But are they living there because of state taxes? The pattern was established in the decade between 1961 and 1972, before Rhode Island had an income tax (Sgouros, 2006a). By far the most affluent zip codes in the Providence metropolitan area, 02806, 02818 and 02906 (Barrington, East

Greenwich, and the East Side of Providence), are still safely (though barely) within Rhode Island's borders. The concentration of wealthy people in Seekonk is about the same as it is in North Kingstown. In other words, the evidence tends to suggest that this statistic is essentially an artifact of the flight to the suburbs that has marked the last few decades along with our state's geographic peculiarities.¹

Making Rhode Island more attractive to the wealthy is often cited as a solution to the state's economic problems. Unfortunately, the evidence to support this claim is scant. Some see Rhode Island in a unique position to capture the urban flight from the Boston Metro area, and prosper in much the same way that Northern New Jersey and Southwestern Connecticut have as suburbs for New York City. This scenario is not likely to play out anytime soon. One reason, is simple geography. Rhode Island and Boston are separated by more attractive Massachusetts cities and towns, than New Jersey and Connecticut are from New York City. In fact, the flight from Boston was responsible for the boom along Route 128 High-Tech corridor in the 1980s and 1990s. Further flight from that area has led to the development of Framingham to the south and Chelmsford to the north, but has yet to reach Rhode Island in large numbers. Another reason, is New Hampshire already occupies the low-cost niche for the Boston area, and is largely without the urban problems of Rhode Island.

¹What's more, in 2001, the statistic was that Massachusetts had 3.18% of its taxpayers over \$200,000 and Rhode Island only 1.67%. In other words, we've "improved" since 2001, while Massachusetts hasn't.

11. CONCLUSION

IF WE CARE about the condition of the urban schools in Rhode Island, there are many things we can do that are supported by research in other cities and other states. Research into poverty and nutrition has shown what some of the major obstacles are to children's cognitive development and academic success. We know what some of the real problems are that are faced by students in our urban schools, and we know some ways to help. We don't know if these solutions will solve all our problems, but we do know that they will help more than the magical thinking that says we only have to expect more in order to get more.

From the top of our government on down to the bottom, the would-be Canutes who create our laws seem to think that sensible policy consists in simply commanding schools to perform better. It never seems to be part of the policy prescription to say precisely what should be done. Instead, schools are told to perform to new benchmarks or to shape up, "or else." Reformers in some states have gone so far as to demand that schools be administered by the private sector, but without suggesting what, exactly, is to be done differently. Those "details" are left to the private administrator.

The teachers in our schools, however, see what's going on every day. They know that the starting line is simply not straight, and that children on one end start at a severe disadvantage to the children at the other end. They know that many



poor children are not prepared for academic success in the same way as their better-off peers. They know that children who arrive at school ill or hungry are not children who can sit still and listen to story books. They know that unstable living situations create children who worry more about their home lives than about their lessons. And so they know that fighting poverty is a crucial part of providing a useful education for all our children.

Well-documented research tells us further that educating parents is a good way to educate children, that crumbling schools and overpopulated classrooms make any teacher's job harder, and that funding inequities between school districts make it harder for children in the poor districts to keep up. We can address these if we

choose to, or we can continue to sigh about the fate of our schools.

Reforming our state's schools will be hard work. If it was easy, it would have been done long ago. But it is not going to be done by anyone else, and it won't be done so long as no one offers concrete solutions of the sort that can be implemented by a school board or the legislature. This paper contains many suggestions informed by real research on the topics. Many of them will help, some by a lot. It's possible that changing conditions will mean that some suggestions won't be helpful here, even if they've succeeded somewhere else. But the important point is that none of them will help at all unless we muster the bravery to try them.

We don't have to wring our hands about our urban schools, we can roll up our sleeves and take action instead. But reaching this point will require the political will to do something about the problem. The situation is only hopeless if we don't have that.

12. LEGISLATION

DURING THIS legislative session there are several bills under consideration in the Rhode Island General Assembly that would address some of the conditions described in this report.

Some of the recommendations here refer to the state budget, and others have no bill, but are simply good ideas waiting for someone to take them on.

12.1 BILLS

The following bills are under consideration in the 2006 session of the Rhode Island General Assembly:

S2113

(Raptakis) Index the minimum wage to the rate of inflation.

H7129 & S2875

(Coderre and Pichardo) Increase clothing allowance to \$150 per child per year.
Cost: \$3,000,000

H7266 & S2555

(SanBento and Sosnowski) Reinstate the \$100 weatherization cash assistance. **Cost: \$1,200,000**

H7218 & S2574

(Naughton and Perry) Continue to provide outreach to enhance access to the federal food stamp program. **Cost: \$150,000**

H7387 & S2544

(Dennigan and Gibbs) Allow Family Independence Program (FIP) recipients to count up to 10 hours a week of education toward their 30-hour work requirement. **Cost: \$600,000** (n.b. The Governor's FY07 proposal would increase the work requirement to 35 hours.)

H6936 & S2838

(Diaz and Pichardo) Allow undocumented high school graduates to attend public colleges at the in-state tuition rate.

H7220 & S2521

(Dennigan and Roberts) Increase the income eligibility for the 'Starting Right' childcare assistance program from 225% to 250% of the poverty line. **Cost: \$1,300,000**

H7289 & S2318

(Naughton and Levesque) Allow parents who are working at least 25 hours a week to also use subsidized childcare to pursue their education.
Cost: \$600,000

H7406 & S2518

(Handy and Lima) Roll back the RIte Care premium to 2% of family income.
Cost: \$600,000

H7262 & S2840

(Fox and Pichardo) Fund the Neighborhood Opportunities Program at \$7.5 million to build affordable housing (Funded through borrowing at RI Housing).

H7764 & S2873

(Slater and Tassoni) General obligation bonds of \$75 million to be submitted to voter approval for the construction of affordable housing.

H7367 & S2543

(Dennigan and Perry) Establish the Community Development Corporation building fund to provide financial support for non-profit affordable housing developers.

S2696

(Roberts and Sosnowski) Prohibits vending machines that dispense non-nutritious foods and beverages in schools.

12.2 BAD IDEAS

The following bill is under consideration this year, and ought to be defeated:

H7556

Entitled the “Taxpayer Relief Act of 2006,” this bill would limit the scope of teacher contracts to include no issues of classroom conditions, including class sizes.

12.3 BUDGET

In addition, the following are (or should be) under discussion with respect to the proposed FY07 state budget.

COZ Funding

The Child Opportunity Zones are funded via a \$400,000 legislative grant, shared between the ten schools that host these programs. These grants are proposed to be cut 25%. The COZ program has already been cut from \$650,000 over the past four years.

Adult Literacy

Expand the capacity of adult basic education in the state according to the plan outlined by the Human Resources Investment Council. Don’t cut the literacy programs funded via the Institute for Labor Studies and Research (ILSR cost: \$293,000).

Earned Income Tax Credit (EITC)

Increase the refundability of the state Earned Income Tax Credit. *Cost: \$2,700,000*

School Lunches

The Governor’s request for free and reduced price lunches was \$23,000 less than the Regents’ estimate of what will be required.

Affordable Housing Trust Fund

Finance the affordable housing and open space trust fund with a progressively graduated real estate transfer tax.

Real Estate Capital Gains Tax

Discourage real estate speculation with a progressive tax on real estate capital gains on property held less than six years.

APPENDIX A

<i>Town</i>	<i>Average Income</i>	<i>Income Rank</i>	<i>% Grade 11 Reading Proficiency</i>	<i>Reading Proficiency Rank</i>
Barrington	\$84,657	2	78%	1
Bristol/Warren	\$54,017	23	58%	10
Burrillville	\$58,979	16	46%	23
Central Falls	\$26,844	31	21%	31
Chariho	\$60,083	15	57%	12
Coventry	\$60,315	14	50%	17
Cranston	\$55,241	20	49%	19
Cumberland	\$63,194	11	59%	9
East Greenwich	\$90,221	1	75%	2
East Providence	\$48,463	26	33%	27
Exeter/WG	\$72,811	3	51%	16
Foster-Glocester	\$62,970	12	49%	20
Johnston	\$54,837	21	45%	25
Lincoln	\$61,257	13	61%	7
Middletown	\$57,322	18	58%	11
Narragansett	\$67,571	8	64%	4
Newport	\$54,116	22	49%	21
North Kingstown	\$69,559	4	69%	3
North Providence	\$51,655	25	45%	26
North Smithfield	\$67,331	9	62%	5
Pawtucket	\$39,038	28	30%	28
Portsmouth	\$68,577	5	56%	13
Providence	\$32,058	30	23%	30
Scituate	\$67,593	7	60%	8
Smithfield	\$66,320	10	55%	15
South Kingstown	\$67,912	6	62%	6
Tiverton	\$58,917	17	56%	14
Warwick	\$56,225	19	47%	22
West Warwick	\$47,674	27	46%	24
Westerly	\$53,165	24	50%	18
Woonsocket	\$38,353	29	29%	29
State Average	\$58,621		51%	

BIBLIOGRAPHY

- 21st Century Commission. *Educating ALL Our Children*. Final report, State of Rhode Island, 1992.
- Allen, Nancy L., Frank Jenkins, Edward Kulick and Christine A. Zelenak. *Technical Report of the NAEP 1996 State Assessment Program in Mathematics*. Technical Report NCES 97-951, U.S. Department of Education, Office of Educational Research and Improvement, Washington, DC, 1996.
- Argys, Laura M. and Daniel I. Rees. Unionization and school productivity: A reexamination. *Research in Labor Economics*, 1995: 14:49-68.
- Averett, Susan and Michelle McLennan. Exploring the effect of class size on student achievement: What have we learned over the past two decades? In Johnes, Geraint and Jill Johnes, eds., *International Handbook on the Economics of Education*, chapter 9. Edward Elgar, Cheltenham, UK, 2004. URL <http://webpages.ursinus.edu/ecba/mclennanresearch/Classe-achievement.pdf>. Chapter available at URL given, 2 March 2006.
- Baker, Valerie O'Toole, Janet Friedman and Rita Schmitt. Asthma management: Part I: An overview of the problem and current trends. *Journal of School Nursing*, June 2002: 18(2):128-137.
- Barnett, W. Steven. *The Perry Preschool Program and Its Long-term effects: A benefit-cost analysis*. High/Scope Early Childhood Policy Papers 2, High/Scope Educational Research Foundation, Ypsilanti, MI, 1985.
- . Long-term effects of early childhood programs on cognitive and school outcomes. *The Future of Children*, Winter 1995: 5(3):25-50. URL <http://futureofchildren.org>. Published by the Brookings Institution.
- Bauch, Jerold P., ed. *Early Childhood Education in the Schools*. National Education Association Professional Library, Washington, DC, 1988.
- Bell, Courtney A. *All Choices Created Equal? How Good Parents Select "Failing" Schools*. Working paper, National Center for the Study of Privatization of Education, Teachers College, Columbia University, New York, October 2005. URL http://www.ncspe.org/publications_files/OP106.pdf.
- Berner, Maureen M. Building conditions, parental involvement, and student achievement in the District of Columbia Public School System. *Urban Education*, 1993: 28(1):6-29. This article was part of the author's master's thesis which is frequently cited under her maiden name of Edwards.

- Birman, Beatrice F., Laura Desimone, Andrew C. Porter and Michael S. Garet. Designing professional development that works. *Educational Leadership*, May 2000: 57(8):28-33. See also Garet *et al.* (1999).
- Bonilla, Sheila, Sarah Kehl, Kenny Y. C. Kwong, Tricia Morphew, Rital Kachru and Craig A. Jones. School absenteeism in children with asthma in a Los Angeles inner city school. *Journal of Pediatrics*, December 2005: 147:802-806.
- Bradley, Robert H. Environment and parenting. In Bornstein, Marc H., ed., *Handbook of parenting, Vol 2: Biology and ecology of parenting*, pages 235-261. Lawrence Erlbaum Associates, Mahwah, NJ, 1st edition, 1995.
- Brooks-Gunn, Jeanne, Lisa J. Berlin and Alison S. Fuligni. Early childhood intervention programs: What about the family? In Shonkoff, Jack P. and Samuel J. Meisels, eds., *Handbook on Early Childhood Intervention*, pages 549-588. Cambridge University Press, New York, 2d edition, 2000.
- Brooks-Gunn, Jeanne, Alison S. Fuligni and Lisa J. Berlin, eds. *Early child development in the 21st century: Profiles of current research initiatives*. Teachers College Press, New York, 2003.
- Brown, J. Larry and Laura P. Sherman. Policy implications of new scientific knowledge. *Journal of Nutrition*, 1995: 125:2281S-2284S.
- Burchinal, Margaret R., Joanne E. Roberts, Rhodus Jr. Riggins, Susan A. Zeisel, Eloise Neebe and Donna Bryant. Relating quality of center-based child care to early cognitive and language development longitudinally. *Child Development*, March/April 2000: 71(2):339-357.
- Campbell, Frances A., Elizabeth P. Pungello, Shari Miller-Johnson, Margaret Burchinal and Craig T. Ramey. The development of cognitive and academic abilities: Growth curves from an early childhood educational experiment. *Developmental Psychology*, 2001: 37(2):231-242.
- Card, David and Alan B. Krueger. School quality and black-white relative earnings: A direct assessment. *Quarterly Journal of Economic*, February 1992: 107(1):151-200.
- Carini, Robert M. Teacher unions and student achievement. In Molnar, Alex, ed., *School Reform Proposals: The Research Evidence*, chapter 10, pages 197-216. Information Age Publishing, Greenwich, CT, 2002.
- Cash, Carol S. *A Study of the Relationship between School Building Condition, Student Achievement and Behavior*. Ph.D. thesis, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1993.
- Caughy, Margaret O'Brien, Janet A. DiPietro and Domma M. Strobino. Day-care participation as a protective factor in the cognitive development of low-income children. *Child Development*, 1994: 65:457-471.

- Clark, Reginald. *In-School and Out-of-School Factors That Build Student Achievement: Research-Based Implications for School Instructional Policy*. North Central Regional Educational Laboratory/Learning Point Associates, Napierville, IL, 2002. URL <http://www.ncrel.org/gap/clark/summary.htm>.
- Consortium for Longitudinal Studies, ed. *As the twig is bent...lasting effects of preschool programs*. Erlbaum, Hillsdale, NJ, 1983.
- Crain, E. F., K. B. Weiss, P. E. Bijur, M. Hersh, L. Westbrook and Stein R. E. An estimate of the prevalence of asthma among inner-city children. *Pediatrics*, September 1994: 94(3):356-362.
- Cullen, Julie Berry, Brian A. Jacob and Steven Levitt. *The Effect of School Choice on Student Outcomes: An Analysis of the Chicago Public Schools*. Working paper 10113, National Bureau of Economic Research, Cambridge, MA, November 2003. URL <http://papers.nber.org/papers/w10113>.
- Currie, Janet and Duncan Thomas. School quality and the longer term effects of head start. *Journal of Human Resources*, 2000: 35:755-774.
- DeNavas-Walt, Carmen, Bernadette D. Proctor and Cheryl Hill Lee. *Income, Poverty and Health Insurance Coverage in the United States: 2004*. Current Population Report P60-229, US Census Bureau, Washington, DC, August 2005. URL <http://www.census.gov/prod/2005pubs/p60-229.pdf>.
- Denton, Kristin, Elvira Germino-Hausken and Jerry West. *America's Kindergartners*, volume NCES 2000-070. U.S Department of Education, National Center for Education Statistics, Washington, DC, 2000. URL <http://nces.ed.gov/pubs2000/2000070.pdf>.
- Dickens, Charles. *The Life and Times of Nicholas Nickleby*. New Ed. Penguin Classics, London, 1999. Originally published 1839.
- Dillon, Sam. Schools cut back subjects to push reading and math. *New York Times*, March 26 2006: URL <http://whatcheer.net/archive/refs/dillon06.html>.
- Earthman, Glen I. A statewide study of student achievement and behavior and school building condition. Paper presented at the Annual Meeting of the Council of Education Facility Planners, International (Dallas, TX), September 1995. URL http://edfacilities.org/rl/impact_learning.cfm. ERIC: ED 387 878.
- Eberts, Randall W. and Joe A. Stone. Teacher unions and the productivity of public schools. *Industrial and Labor Relations Review*, April 1987: 40(3):354-363.
- Egbonu, Lisa and Barbara Starfield. Child health and social status. *Pediatrics*, May 1982: 69:550-557.
- Figlio, David N. and Joshua Winicki. *Food for Thought: The Effects of School Accountability Plans on School Nutrition*. Working paper 9319, National Bureau of Economic Research, Cambridge, MA, November 2002. URL <http://papers.nber.org/papers/w9319>.

- Garet, Michael S., Beatrice F. Birman, Laura Desimone, Andrew C. Porter and Kwang Suk Herman, Rebecca with Yoon. *Designing Effective Professional Development: Lessons from the Eisenhower Program*. Technical report, US Department of Education, Washington, DC, December 1999. URL LINK <http://www.ed.gov/inits/teachers/eisenhower/>.
- Garrett, M. H., P. R. Rayment, M. A. Hooper, M. J. Abramson and B. M. Hooper. Indoor airborne fungal spores, house dampness and associations with environmental factors and respiratory health in children. *Clinical and Experimental Allergy*, 1997: 28:459-467.
- Gould, Marge Christensen and Herman Gould. A clear vision for equity and opportunity. *Phi Delta Kappan*, December 2003: pages 324-328.
- Greenwald, Rob, Larry V. Hedges and Richard D. Laine. The effect of school resources on student achievement. *Review of Educational Research*, Fall 1996a: 66(3):361-396. But see also Hanushek (1996).
- . Interpreting research on school resources and student achievement: A rejoinder to Hanushek. *Review of Educational Research*, Fall 1996b: 66(3):411-416.
- Guskey, Thomas R.
- What you assess may not be what you get. *Educational Leadership*, March 1994: 51(6):51-54. URL http://www.ncacasi.org/documents/other/what_you_assess.
- Hancock, Dawson R. Encouraging teachers to remain in the profession: A model for stress reduction. *Educational Forum*, Fall 1998: 63:166-172.
- Hanushek, Eric A. A more complete picture of school resource policies. *Review of Educational Research*, Fall 1996: 66(3):397-409. A reply to Greenwald *et al.* (1996a). But see Greenwald *et al.* (1996b).
- Hanushek, Eric A., John F. Kain and Steven G. Rivkin. *Teachers, Schools and Academic Achievement*. Working Paper 6691, National Bureau of Economic Research, Cambridge, MA, August 1998. URL <http://www.nber.org/papers/w6691>.
- . Disruption versus Tiebout improvement: the costs and benefits of switching schools. *Journal of Public Economics*, 2004: 88:1721-1746.
- Harris, Paul. The prevalence of visual conditions in a population of juvenile delinquents. *Optometry Extension Project*, 1989: 61:1-24. URL <http://www.babousa.org/Juvenile.pdf>.
- . Learning-related visual problems in Baltimore city: A long-term program. *Journal of Optometric Vision Development*, 2001: 2(33):75-115.
- Hart, Betty and Todd R. Risley. *Meaningful Differences in the Everyday Experience of Young American Children*. Paul H. Brookes Publishing Co., Baltimore, MD, 1995.
- Haskins, Ron. Beyond metaphor: the efficacy of early childhood education. *American Psychologist*, 1989: 44:274-282.

- Hines, Eric Wayne. *Building Condition and Student Achievement and Behavior*. Ph.D. thesis, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1996. URL http://edfacilities.org/rl/impact_learning.cfm. ERIC: ED 478 350.
- Hoffman, Richard E., Rachel C. Wood and Kathleen Kreiss. Building-related asthma in Denver office workers. *American Journal of Public Health*, January 1993: 83(1):89-93.
- Ingersoll, Richard M. Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, Fall 2001: 38(3):499-534.
- . The teacher shortage: A case of wrong diagnosis and wrong prescription. *NASSP Bulletin*, June 2002: 86(631):16-31.
- Johnson, Roger A. and Joel N. Zaba. The visual screening of adjudicated adolescents. *Journal of Behavioral Optometry*, 1999: 10(1):13-17.
- Kane, Thomas J. and Douglas O. Staiger. The promise and pitfalls of using imprecise school accountability measures. *Journal of Economic Perspectives*, Fall 2002: 16(4):91-114.
- Karoly, Lynn A., Peter W. Greenwood, Susan S. Everingham, Jill Hoube, M. Rebecca Kilburn, C. Peter Rydell, Matthew Sanders and James Chiesa. *What We Know and Don't Know About the Benefits of Early Childhood Intervention*. Monograph MR-898-TCWF, RAND Corporation, Santa Monica, CO, 1998.
- Korenman, Sanders D., Jane E. Miller and Sjaastad John E. Long-term poverty and child development in the United States: Results from the NLSY (National Longitudinal Study of Youth). *Children and Youth Services Review*, 1995: 17(1/2):127-155.
- Krueger, Alan B. and Diane M. Whitmore. *The Effect of Attending a Small Class in the Early Grades on College-Test Taking and Middle School Test Results: Evidence from Project STAR*. Working paper 427, Princeton University, Industrial Relations Section, Princeton, NJ, September 1999. URL http://www.irs.princeton.edu/pubs/working_papers.html.
- . *Would Smaller Classes Help Close the Black-White Achievement Gap?* Working paper 451, Princeton University, Industrial Relations Section, Princeton, NJ, March 2001. URL http://www.irs.princeton.edu/pubs/working_papers.html.
- Kurth, M. Teacher unions and excellence in education: An analysis of the decline of sat scores. *Journal of Labor Research*, 1988: 8:351-387. But see Nelson and Gould (1988), which largely discredits this paper.
- Lanham, James Warren III. *Relating Building and Classroom Conditions to Student Achievement in Virginia Elementary Schools*. Ph.D. thesis, Virginia Polytechnic and State University, Blacksburg, VA, April 1999. URL <http://scholar.lib.vt.edu/theses/available/etd-041899-150623>.

- Lauer, Patricia A., Motoko Akiba, Stephanie B. Wilkerson, Helen S. Apthorp, David Snow and Mya Martin-Glenn. *The Effectiveness of Out-of-School-Time Strategies in Assisting Low-Achieving Students in Reading and Mathematics: A Research Synthesis*. Mid-Continent Research for Education and Learning/U.S. Department of Education, Aurora, CO, January 2004.
URL http://www.mcrel.org/PDF/SchoolImprovementReform/5032RR_RSOSTeffectiveness.pdf.
- Levitt, Steven D. and Stephen J. Dubner. *Freakonomics: A Rogue Economist Explores the Hidden Side of Everything*. William Morrow, New York, 2005.
- Lewis, Morgan. *Facility Conditions and Student Test Performance in the Milwaukee Public Schools*. Ph.D. thesis, Virginia Polytechnic Institute and State University, Blacksburg, VA, 2001.
URL http://edfacilities.org/rl/impact_learning.cfm. ERIC: ED 459 593.
- Li, Haojie, Huiman X. Barnhart, Aryeh D. Stein and Reynaldo Martorell. Effects of early childhood supplementation on the educational attainment of women. *Pediatrics*, 5 November 2003: 112(5):1156-1162.
- Loeb, Susanna, Bruce Fuller, Kagan Lynn and Carrol Bidemi. Child care in poor communities: early learning effects of type, quality and stability. *Child Development*, January/February 2004: 75(1):47-65.
- Loucks-Horsley, Susan, Nancy Love, Katherine E. Stiles, Susan Mundry and Peter W. Hewson. *Designing Professional Development for Teachers of Science and Mathematics*. Corwin Press, Thousand Oaks, CA, 2d edition, 2003.
- Lubienski, Christopher and Sarah Theule Lubienski. *Charter, Private, Public Schools and Academic Achievement: New Evidence from NAEP Mathematics Data*. Working paper, National Center for the Study of Privatization of Education, Teachers College, Columbia University, New York, January 2006. URL http://www.ncspe.org/publications_files/OP111.pdf.
- McWalters, Peter. School improvement in Rhode Island: The data, the outlook, the policy implications. Presentation to the Rhode Island Board of Regents, January 2006.
- Mendell, Mark J. and Garvin Heath. *A Summary of Scientific Findings on Adverse Effects of Indoor Environments on Students' Health, Academic Performance and Attendance*. Policy and program studies service publication, U.S. Department of Education, Washington, DC, 2004.
URL <http://www.iehinc.com/PDF/effects> Appendix 3 discusses absenteeism in depth.
- Meyer, Janice D. and James P. Barufaldi. The role of sustained professional development in science teacher renewal and retention, March 2003. URL <http://www.edb.utexas.edu/faculty/barufaldi/Presentation/201698ProceedPaper.pdf>. A paper presented at the 2003 Annual International Meeting of the National Association for Research in Science Teaching. Downloaded 23 March 2006.
- Milkman, Martin. Teachers' unions, productivity, and minority student achievement. *Journal of Labor Research*, Winter 1997: 18(1):137-150.

- Milton, Donald K., P. Mark Glencross and Michael D. Walters. Risk of sick leave associated with outdoor air supply rate, humidification and occupant complaints. *Indoor Air*, December 2000: 10(4):212-221.
- Mitchell, Douglas, Cristi Carson and Gary Badarak. *How Changing Class Size Affects Classrooms and Students*. Technical Report 1989-0013, California Educational Research Cooperative, Riverside, CA, May 1989. URL http://cerc.ucr.edu/publications/PDF_Transfer/Class_Size/cs002_how_changing_class_size/cs002_how_changing_class_size.pdf. Fourth printing, May 1997.
- Murphy, J. Michael, Cheryl A. Wehler, Maria E. Pagano, Michelle Little, Ronald E. Kleinman and Michael S. Jellinek. Relationship between hunger and psychosocial functioning in low-income American children. *Journal of the American Academy of Child & Adolescent Psychiatry*, February 1998: 37(2):167-170.
- NCTAF. *Unraveling the "Teacher Shortage" Problem: Teacher Retention is the Key*. Research report, National Commission on Teaching and America's Future, Washington, DC, August 2003. URL <http://www.nctaf.org/article/index.php>. Downloaded 23 March 2006.
- NEA. *Rankings and Estimates: Rankings of the States 2004 and Estimates of School Statistics 2005*. Data report, National Education Association, Washington, DC, June 2005. URL <http://www.nea.org/edstats/images/05rankings.pdf>. Updated data also available at <http://www.nea.org/edstats/images/05rankings-update.pdf>.
- Nelson, F. H. and J. C. Gould. Teacher unions and excellence in education: Comment. *Journal of Labor Research*, 1988: 9:379-387.
- Nevalainen, Aino and Markku Seuri. Of microbes and men. *Indoor Air*, 2005: 15 Suppl(9):58-64.
- NICHD, Early Child Care Research Network. Child-care structure process outcome: Direct and indirect effects of child-care quality on young children's development. *Psychological Science*, May 2002: 13(3):199-206.
- Nicholas, Stephen W., Jean-Louis Betina, Benjamin Ortiz, Mary Northridge, Katherine Shoemaker, Roger Vaughan, Michaela Rome, Geoffrey Canada and Vincent Hutchinson. Addressing the childhood asthma crisis in Harlem: The Harlem Children's Zone Asthma Initiative. *American Journal of Public Health*, February 2005: 95(2):245-249.
- O'Neil, Sharon Lund, Noah Barysh and Stanley J. Setear. Determining school programming needs of special population groups: a study of asthmatic children. *Journal of School Health*, August 1985: 55(6):237-239.
- Orfield, Antonia, Frank Basa and John Yun. Vision problems of children in poverty in an urban school clinic: Their epidemic numbers, impact on learning and approaches to remediation. *Journal of Optometric Vision Development*, 2001: 3(32):114-141.

- Ozawa, Martha N. Antipoverty effects of public income transfers on children. *Children and Youth Services Review*, 1995: 17(1/2):43-59.
- Parks, Greg. The High/Scope Perry Preschool Project. *Juvenile Justice Bulletin*, October 2000: A publication of the Department of Justice Office of Juvenile Justice and Delinquency Prevention.
- Peltzman, S. Political economy of public education: Non-college-bound students. *Journal of Law and Economics*, 1996: 39:73-120.
- Pollitt, Ernesto. Poverty and child development: relevance of research in developing countries to the United States. *Child Development*, 1994: 65:283-295.
- Poverty Institute. *Facts About Child Care Assistance in Rhode Island*. Issue paper, Rhode Island College, Providence, RI, February 2006. URL <http://povertyinstitute.org/matriarch/documents/Childfacts> Downloaded 17 February 2006.
- PROBE. *Counting on Ourselves*. Report, Providence Blueprint for Education, The Providence Plan and The Population Studies and Training Center of Brown University, Providence, RI, 1998. URL PERLINK <http://204.17.79.244/pubs/reports/infogrp/counting.pdf>. Downloaded 17 February 2006.
- Reitzug, Ulrich C. Professional development. In Molnar, Alex, ed., *School Reform Proposals: The Research Evidence*, chapter 12, pages 235-258. Information Age Publishing, Greenwich, CT, 2002.
- Rhode Island Kids Count. *Child Poverty in Rhode Island: A Statistical Profile*. Issue brief, Rhode Island Kids Count, Providence, RI, January 2006. URL <http://www.rikidscount.org>.
- RIDE. *Information Works!* Technical report, Rhode Island Department of Education, 2005. URL <http://www.infoworks.ride.uri.edu/2005>. The 2005 reports are based on the 2004 assessment data.
- . *Draft Rhode Island K-12 Grade Span Expectations in Science/Life Science*. Draft document, Rhode Island Department of Education, 2006. URL http://www.ridoe.net/standards/gle/Science_GSE/Draft_K-12_Life_Science_3.0.pdf. Version 4.0, updated March 1, downloaded April 18, 2006.
- Ryan, Rebecca M., Rebecca C. Fauth and Jeanne Brooks-Gunn. Childhood poverty: Implications for school readiness and early childhood education. In Spodek, Bernard and Olivia N. Saracho, eds., *Handbook of Research on the Education of Young Children*, chapter 18, pages 323-347. Macmillan, New York, 2d edition, 2006.
- Sanders, William L. and June C. Rivers. *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*. Research progress report, University of Tennessee Value-Added Research and Assessment Center, Knoxville, TN, November 1996. URL <http://www.heartland.org/pdf/21803a.pdf>.

- Schweinhart, Lawrence J., Jeanne Montie, Zongping Xiang, W. Steven Barnett, Clive R. Belfield and Milagros Nores. *The High/Scope Perry Preschool Study Through Age 40: Summary, Conclusions and Frequently Asked Questions*. Monograph 1-57379-25, High/Scope Educational Research Foundation, Ypsilanti, MI, November 2005. URL <http://www.highscope.org/Research/PerryProject/PerryAge40SumWeb.pdf>. A chapter and summary can be found at the URL given.
- Schweinhart, Lawrence J. and David P. Weikart. Evidence that good early childhood programs work. *Phi Delta Kappan*, April 1985: 66(8):216-221. Reprinted in Bauch (1988).
- Seuri, M., Husman K., H. Kinnunun, M. Reiman, Kresu R., Kuronen P., Lehtomaki K. and M. Paananen. An outbreak of respiratory diseases among workers at a water-damaged building—a case report. *Indoor Air*, September 2000: 10(3):138-145.
- Sgouros, Tom. How we treat ourselves. *Rhode Island Policy Reporter*, December 2004: 8:1-4. URL <http://whatcheer.net/ripr/riprfip.pdf>.
- . Looking for causes. *Rhode Island Policy Reporter*, June 2005a: 11:1-4. URL <http://whatcheer.net/ripr/ripr11.pdf>.
- . Nor a roof against the rain. *Rhode Island Policy Reporter*, November 2005b: 14:1-4. URL <http://whatcheer.net/ripr/ripr14.pdf>.
- . Where are the rich? *Rhode Island Policy Reporter*, March 2006a: 17:1-2. URL <http://whatcheer.net/ripr/ripr17.pdf>.
- . Why does someone buy a house? *Rhode Island Policy Reporter*, January 2006b: 15:1-3. URL <http://whatcheer.net/ripr/ripr15.pdf>.
- Silverstein, Marc D., Joanne E. Mair, Slavica K. Katusic, Peter C. Wollan, Edward J. O'Connell and John W. Yunginger. School attendance and school performance: A population-based study of children with asthma. *Journal of Pediatrics*, 2001: 139(2):278-283.
- Smedje, G., D. Norbäck and C. Edling. Asthma among secondary schoolchildren in relation to the school environment. *Clinical and Experimental Allergy*, November 1997: 27(11):1270-1278.
- Snow, Catherine E., Wendy S. Barnes, Jean Chandler, Irene F. Goodman and Lowry Hemphill. *Unfulfilled Expectations: Home and School Influences on Literacy*. Harvard University Press, Cambridge, MA, 1991.
- Starfield, Barbara. Child health and socioeconomic status. *American Journal of Public Health*, June 1982: 72:532-534.
- Stevens, Floraline I. *Case Studies of Teachers Learning and Applying Opportunity To Learn Assessment Strategies in Two Urban Elementary Schools*. Research report ERIC: ED 437487, Temple University Center for Research in Human Development and Education, Philadelphia, PA, 1999.

- Taskinen, T. M., S. Laitenen, A. Nevalainen, A. Vepsäläinen, T. Meklin, M. Reiman, M. Korppi and T. Husman. Immunoglobulin G antibodies to moulds in school-children from moisture problem schools. *Allergy*, January 2002: 57(1):9-16.
- Titze, Judy, Sasha Warner-Berry, Kip Bergstrom and Beth Ashman Collins. *Adult Basic Education in Rhode Island: Survey Results*. Technical report, Rhode Island Economic Policy Council, Providence, RI, 2004. URL <http://www.ripolicy.org/literacy/Survey/>. Prepared for the Governor's Adult Literacy Task Force.
- Yeung, W. Jean, Miriam R. Linver and Jeanne Brooks-Gunn. How money matters for young children's development: parental investment and family processes. *Child Development*, November/December 2002: 73(6):1861-1879.
- Zigarelli, Michael A. The linkages between teacher unions and student achievement. *Journal of Collective Negotiations*, 1994: 23(4):299-319.

