Evolution of California State School Finance with Implications from Other States

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This paper provides an overview, evolution, and critique of the California school finance system. It is a companion to the descriptive analysis by Tim Timar, and comments on the papers by Peg Goertz and Allan Odden that provide a comparative state perspective of New Jersey, Wyoming, and Kentucky. The paper focuses upon the major flaws in the California finance system, as well as public opinion surveys on what to do about them. It addresses the inability of California to make non-incremental change in its whole finance system. California has created an aligned system of standards based reform in numerous ways, but has never integrated its basic finance system with what students are expected to know and do.

Every state's school finance system is different and shaped by its distinctive history, culture, political institutions, and socio-economic characteristics. Thomas Timar's paper, "Financing K-12 Education in California: A System Overview," demonstrates that the result of California's school finance evolution is a system broken in every way. While Timar analyses the details of the current finance system, this paper begins with its historical roots. For example, California uses state ballot initiatives to implement significant political changes, such as Proposition 13 in 1978. In 2005, there were over 979 school districts in California, but 44% have fewer than 1,000 students.

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Over 25% of California's 6.4 million school children are English Learners. Legislation in 1972 established the basis for the current state general aid formula, but the state has been transformed in many ways since then.

The result of California's history is a finance system that has no coherent conceptual basis, is incredibly complex, fails to deliver an equal or effective education to all children, and is a historical accretion. The finance system is more centralized than almost any state system in the nation.[1] A good place to begin the recent history is 1970, when schools got their money primarily from local property taxes, which yielded enough money to put California schools' expenditures per pupil in the top 10 states. State politicians heeded local demands in the early 1970s for property-tax relief. School districts and other units of local government around the state had been regularly raising the amount they took in from local property owners as the assessed values of homes escalated. So the state came up with a plan: Freeze the amount that each school district could take in per pupil for general spending. That became known as a district's 1972 "revenue limit."

The state also had another reason for capping a district's revenue in 1972. Politicians knew, based on lower birth rates, that enrollments would decline. So if districts kept collecting the same amount from taxpayers, they would have more and more to spend per student, as was happening in such states as New York and Pennsylvania. On the other hand, state revenue limits, based on revenues permitted per

[1] See comparative state data on www.schoolmatters.com. Most of these state centralization studies focus on revenue sources, not whether the state controls the distribution of local property tax revenues as California does. Consequently, California state finance centralization is often understated in many national tables, because they only use the revenue sources to rank states. California finance policy centralization is also enhanced by categorical restriction for one third of the funds local districts receive, and a voluminous education code.

pupil, forced state and local spending to decline each time a student was lost. And the predictable result was that California's national spending rank per pupil dropped sharply during the 1970-1978 enrollment decline. Today, despite spending $60 billion a year to educate students from kindergarten through high school, California ranks below the national average in per-pupil spending when adjusted for the cost of living.

Before long, revenue limits became a tool used to further twist the financing system. In 1971, the state Supreme Court had ruled in a landmark case, Serrano vs. Priest, that the state had to sever the close linkage between district assessed property value per pupil and total district spending. In 1971, expenditures among the more than 1,200 California districts varied widely because district tax rates and property values were so different. The court focused only on general purpose operating spending, and ignored categorical aid and construction. General-purpose spending covers such things as teacher salaries, supplies and administrative costs. By 1976, the state determined that the way to force district equalization would be to adjust districts' revenue limits. The state would increase the revenue limits for low-spending districts faster than for high-spending districts, so the gap between them would close over time. However, before the state could equalize spending, Proposition 13 passed in 1978, drastically cutting local property taxes. The state bailed out the local school districts from its large surplus and, in what marked a major turning point, assumed primary responsibility for funding schools. Because of limited revenue, state policy between 1979 and 1985 pushed toward spending equality partly by leveling down districts with above average revenue limits. The state used a “squeeze factor” that provided lower inflation rates for high spending districts.

Today, for almost all pupils, the slice of a property owner's property tax that is earmarked for education and paid to the county tax collector essentially goes to Sacramento for distribution back to the state's 979 school districts. Then, the state steps in and makes up the balance up to the district's revenue limit. (About 3.3 percent of the state's pupils are in districts that keep all their property taxes, however, because of a 1952 provision, these so-called “basic-aid districts” are heavily concentrated in Northern California, and they are able to spend above the state per-pupil average.)[2] The result of Proposition 13 is even more state control of all school policy, because state politicians believe that they need to regulate a system that is state financed, but traditionally locally-controlled in other policy areas.

By 1983, the state court ruled that the equalization job was done: The state had "equalized" spending among enough of the state's school districts. After appeals of that ruling were turned down, the Serrano vs. Priest mandate to equalize general purpose spending became history. Moreover, state assumption of control of about 80% of total school funding meant that local schools became hostage to the state's volatile sales- and income-tax revenue streams. Even the 1995-2000 economic boom did not raise the state's per-student spending enough to reach the national average. Some districts have resorted to non-profit fundraising foundations and parcel taxes, but these fund-raising devices are not widespread and serve relatively affluent small districts.

[2] Basic aid was enacted decades ago as a way to eject high per pupil property wealth districts from receiving much state aid. In about 85 districts, local property taxes equal or exceed what the districts would have received from their revenue limit funding. These districts keep the excess property taxes, but receive no other non-categorical aid from the state. In 2002, Ross Elementary with 57 students spent $26,175 per pupil.

Voters recognized the schools' plight, and in 1988 passed Proposition 98, which earmarks a specific proportion (about 40 percent) of the state's general-fund revenues for K-12 schools and community colleges. But when state revenues decline, the school-aid guarantee declines as well despite Proposition 98. (For example, revenue limits fell in the 2002-2003 school year.) In 2006, however, Governor Schwarzenegger restored most of the cuts caused largely by the dot com bust in 2001-02.

Piled on top of the state per-pupil revenue limits are more than 100 state and federal special programs, called categorical-aid programs. A district that receives money under a certain "category" must spend it for that purpose, which might range from class-size reduction to advanced placement classes. Categorical aid represents about a third of the money Sacramento spends on schools. Each categorical program created a constituency of beneficiaries that lobbies to preserve it. A disease of "hardening of the categories" ensued that does not allow localities to shift state funds for local needs, but rather focuses upon compliance with earmarked state funds. Local school officials lack money to clean bathrooms, but have some categorical funds for adult education they cannot spend easily within the school year. State categorical spending ballooned in the mid-1960s, and each decade politicians added another sedimentary layer to the mountain of categories. Timar describes a large categorical-aid program gone awry, the Targeted Instructional Improvement Grant, that is distributed according to a politically driven formula for amounts that range from $1,600 to $10 per student.

Pull all this together and today only a handful of experts understand the intricacies of the current finance system. The revenues limit for districts is still based on what they

were spending in 1972 when the local property tax drove the system, but there is even a categorical program to provide some revenue limit equalization. Today, the state provides about 82% of local district operating expenditures, and specifies what needs to be learned and how local districts should meet academic standards.

Some Differences in California Compared to Other States

California's first post World War II change was galvanized by the 1971 Serrano decision. The crucial principle in the Serrano decision was that the link between district spending per pupil and assessed property value per pupil needed to be broken. The court suggested several alternatives for remedy, but the state chose to focus solely on spending disparities among districts for general unrestricted revenue (e.g., not categorical aid). Facilities were not part of the Serrano decision, so there was little pressure on the state to do much quickly despite escalating pupil growth. A court decision in Arizona focused solely on facilities equalization. California's prime concern with Serrano inspired district spending differences also helped keep any discussion of regional cost differences off the state policy agenda. Both Florida (in 1973) and Texas developed substantial adjustments for the different geographical costs in their vast states. California assumes it costs as much to operate a school district in rural California as in San Francisco.

The passage of voter initiatives in California has put the state finance system in a double bind. Proposition 13 caps the property tax and has virtually eliminated local property tax increases based on assessed valuation. Other states have enacted variants of Prop. 13, but none have created an education funding system that sets a de facto floor and ceiling on total state and local property tax allocations as well (Prop. 98).

Another unique California finance element compared to other states is the widespread use of parcel taxes and school foundations to offset Proposition 13 funding restrictions on value based property. Despite the tax inequities caused by using a flat parcel tax in districts where home values vary enormously, 26 local elections were held in 2004 and 2005. Parcel taxes can be helpful at the margin, but cannot generate sufficient revenue to cause fundamental change in the state finance system. They are an unintended loophole in the drafting of Prop. 13. Voters defeated a November 2006 state ballot (proposition 88) for a uniform statewide parcel tax earmarked for class size reduction, textbooks, and safety that would have created a new revenue source.

After Prop. 13, some California parents concluded they should use private money to help finance local schools. California foundations sprouted all over the state, but particularly in high income suburbs. Public school foundations have grown steadily since the early 1980s (foundations raised more than $70 million in 2004). Now California has nearly 600 local school foundations, by far the most in the nation. Some of these foundations encompass school districts, countries, and school sites. They contribute money, in kind services, and volunteers as well as community involvement.[3]

California has relied more than any other state on a mélange of categorical programs. The California categorical approach began in the mid-1960s as state politicians began to lose confidence in the ability of local educators to improve results for disadvantaged children. As collective bargaining intensified in the 1970s, categorical programs became a vehicle to keep increased state aid off the local bargaining table for

[3] Interview with Susan Sweeney, Executive Director, California Consortium of Education Foundations, November, 2206.

increased teacher salaries. California has never seriously considered a weighted pupil formula like Florida or Kentucky uses to adjust for different pupil needs. Pupil weights allow local discretion in program design in other states, but state lack of confidence in local policymakers has resulted in state specification of education interventions through categorical programs.

This state confidence issue has deepened and continued to build for many years. For example, Democratic Governor Gray Davis in 2000 said local control of education was a "disaster" and created many new categoricals. Some of these were incentive programs for local school bonuses if school test scores went up. But the incentive programs did not have much impact on local teacher behavior (PACE, 2000), and were eliminated when the state budget declined in 2001. In 2006, Republican Governor Schwarzenegger created 22 new categorical programs in such areas as art, music, and counseling. These new categorical program requirements add to a gigantic and bloated state education code. The current code contains over 4,000 pages including legal opinions. The code is over 1,500 pages in small print, and focuses on what districts should and should not do. It builds gradually and incrementally with scant pruning of antiquated sections.

In sum, the constraints on California school finance reform go well beyond Serrano, revenue limits, Prop. 13, and Prop. 98. The interaction of all four plus numerous other limits results in an incoherent and unfathomable system. California school finance is a stark contrast to the conceptually based policies developed in Kentucky, Arkansas, and Wyoming. The disjuncture between California's finance and academic standards

policies has become so stark that it is arguably jeopardizing further increases in academic attainment. California can learn from other states that have improved this linkage.

What Sustains and Blocks Finance Reform?

The California school finance system has been under severe attack for many years as evidenced by legislative proposals, law suits (e.g., Williams), newspaper editorials, and unfavorable comparisons with spending in other states. Using an adjustment for California uncontrollable high costs (e.g., housing), the state has ranked in the bottom ten in many school spending categories for the past three decades.

But why has such an outcry not led to a substantial overhaul similar to New Jersey, Kentucky, Arkansas, and Wyoming? One major reason is that the last major lawsuit was Serrano in 1969. The Williams case settled in 2004 was limited to establishing a minimum foundation for facilities, books, and teachers. A minimum foundation is one of the oldest concepts in school finance, and something California used in the early 20th Century. The New Jersey, Kentucky, Arkansas, and Wyoming lawsuits led to a focus on pupil achievement, funding adequacy, and academic standards. But California's experience with Serrano had left lasting negative memories of court policy control, and a focus on equal local district spending only for the revenue limit base. After Prop. 13 in 1978, California relied on controlling expenditure growth in the high spending districts as a major component to comply with Serrano equalization. In California, equalization is seen as a goal without regard to adequacy or academic standards.

A more fundamental reason California school finance has not changed is embodied in a concept called "assumptive worlds of state policymakers." State policy frames and initiatives depend very much on the different perceptual screens that different state policy actors bring to their lawmaking. "These perceptions relate to the expected behaviors, rituals, and judgments about feasible policy options. This perceptual screen is labeled the "assumptive worlds of policymakers" (Marshall, Mitchell, and Wirt, 1989). However, no printed manual of these perceptions exists in each state. Rather, these "assumptive" worlds emerge from the words and stories of policymakers when they informally discuss the persons and processes of their policymaking.

Hidden within each states' policymaking process is a set of questions about appropriate policy direction based on the experiences of elected leaders, staff, lobbyists, and the media. How questions are answered often varies, but the basic questions remain the same:

1. Who must, and who has the right to, *initiate state policy action?* Experience reveals that policymakers' answers focus especially on the roles of the legislature and governor. In California, leadership by the governor has become crucial for a large-scale change in school finance.
2. What are the *unacceptable policy initiatives?* Again, experience shows that unacceptable state policy ideas trample on group, regional, or big-city interests; challenge dominant economic interests; or promote unorthodox approaches. Even limited inquiry among top state policymakers will provide agreed-on accounts of what policy ideas will

not be feasible. In California, Prop. 13 is viewed as immutable and categorical aid is a prime state intervention tool. Rarely are finance incentives related to pupil performance utilized. Proposals to reorganize most categorical grants into a few bloc grants have been rejected by the state political system for decades.

3. What are the *appropriate state policy actions?* Experience again points to such rules as: to get along, go along; carry out informal rituals that will recognize and define the boundaries of power; mobilize everyone who can benefit from a proposed policy, or conversely mobilize those who stand to lose something. Many of the major interest groups are used to Proposition 98 as the key framework and underpinning for California school finance. Interest group politics result in policy that the public may not endorse or feel involves them (Neimand, 2006).

In sum, assumptive state policy worlds are derived from answers to fundamental questions arising everywhere in state policymaking. Over many years, state politics and culture history create a distinctive policy framework rooted in state history. Moreover, these culturally shaped state policies are imposed on new policy actors entering the state's education policy world, a classic form of political socialization. In California and other states, such attitudes about acceptable policy ideas have a dual effect; they keep the policy environment predictable, and they help policymakers build group cohesion that produces incremental education finance changes. California believes that it is special and sets trends for the rest of the world (Neimand, 2007). Californians feel they know what is best for them, and are not very impressed with interstate comparisons.

Policymaker's assumptive worlds have been crucial in constraining policy options for California school finance reforms. For example, Serrano spawned a deeply held assumption by policymakers and educators that any reform cannot disturb spending roughly equal amounts for district revenue limits. Proposition 98 is viewed as a crucial concept underpinning California school finance design. Categorical programs are assumed to be the best way to implement state policy priorities. All these assumptions add up to tinkering with the status quo, and an unwillingness to engage in conceptual changes. These inhibiting assumptions are reinforced by the reluctance to confront the inevitability that finance reform will have political winners and losers among districts and political constituencies. California voters are disproportionately older, whiter, wealthier, better educated, and homeowners. Non voters are younger, more ethnic, poorer, not as educated, and renters (Weintraub, 2006).

Policy stasis is enhanced, and reform urgency is depressed by the periodic economic booms in California that bring interludes of significant state funding increases. These temporary non-incremental state education spending eras are triggered by California's very progressive personal income tax, and stock price volatility. The 2006 state education aid increase of 11% follows in the tradition of the 2000 tech boom, and the 1983 state tax bonanza. These brief state spending upsurges decrease pressure for school finance changes, even though they follow several lean years of state spending (e.g., 2001-2004).

A 2006 synthesis and analysis of recent California opinion polls by Bates Neimand of Washington, D.C. reveals that the public will not galvanize change in school

finance without broad based state leadership and a comprehensive vision and solution. A majority of the public thinks the school finance problem is too big and complex to be addressed by the current mélange of politicians and entrenched interest groups. California has 6.3 million pupils and spends over $60 billion for K-12 operations. The public believes education problems are caused more by inadequate parenting than school finance shortcomings. Moreover, the public does not trust that money raised by state taxes and sent to Sacramento will come back to their local classrooms. The public believes there is substantial waste in local public schools, and want a finance system focused on pupil outcomes. The California public does not respond much to current finance reform symbols like equity, adequacy, or the need to fully fund Prop. 98. Equity implies redistribution of state funds among school districts with a lowest common denominator result. The public believes that adequacy is a minimum standard that will not enable high enough pupil outcomes.

California's powerful education coalition often has been forced to play defense such as resisting vouchers, preserving Prop. 98 guarantees, and recently stopping a series of initiatives proposed by Governor Schwarzenegger in 2005. Public employees spent over $172 million in 2005 to defeat the Governor's initiatives. Two voucher initiatives have been voted on in California; one in 1982, and another in 1992. Both lost by about 70% no vote, despite well financed campaigns. The public is reluctant to overturn the entire finance system through a constitutional amendment.

Despite these formidable obstacles to finance reform, several study groups have advanced bold proposals. For example, The Little Hoover Commission's 1997 report,

"Dollars and Sense: A Simple Approach to School Finance, PACE's "Crucial Issues In California Education, 2000, and the Joint Legislative Committee for the California Master Plan (2003) all have made recommendations for a finance overhaul, as well as new state/local revenue sources. None of these report's major finance components were enacted as PACE observed:

> The emphasis on the equity of funding as seen in state policy discussions through only the revenue limit, over many years, has contributed to the displacement of discussions about the larger questions of equity in California (p. 70, 2000).

All three reports acknowledge that categorical aid can be good policy, but California's current hodge-podge of programs has no rationale about which students need particular services. The New Jersey case demonstrates a consistent long-term focus on a limited number of urban districts, an evolving strategy to focus on student outcomes, and a specific strategy of whole school reform models. No combination like this has existed in California. Moreover, California's categorical programs are rarely evaluated for effectiveness or even how the money was spent (Jacobson, 2006). Legislative oversight of categoricals has declined dramatically since the 1980s when many categoricals had sunset provisions.

Charter School Finance: The Great Exception

California's finance system for "regular" schools is convoluted, complex, and incremental. But a newer charter school finance system is much easier to understand, flexible, and much less categorical. This raises the obvious questions of why the two systems are so different, and why are the charter finance concepts not utilized in the non-charter system? Why are the 500 charter schools trusted to expend public resources more

wisely than 9,000 non-charter schools? Both systems are expected to attain the same pupil outcomes based on identical state academic content standards. The design of charter school finance, however, allowed state policymakers to start from scratch, and they chose a different path.

California has over 500 charters with the initial group beginning in 1993. EdSource (2005) summarizes charter school funding below:

> By contrast, charter schools (except for those in charter districts) receive their funding as a uniform, set amount per pupil, with one amount for general purposes and another a "categorical block grant" that represents aggregate funding for approximately 44 of the categorical programs school districts can receive. While school districts must operate certain programs or follow specific regulations to receive virtually all categorical funding, charter schools may spend categorical block grant funding at their discretions. The block grant funds are allocated based on the average daily attendance (ADA) at the school, not the students enrolled. The amounts vary depending on the age of the school's students, with more money being provided as students get older (p. 16).

Charter schools get more money for high school students that cost more, but for some reason, regular public schools do not (EdSource, 2005, pp. 15-21). In sum, the charter finance system deserves consideration as an alternative to the current non charter nonsystem.

Comparisons with New Jersey

The Abbott case in New Jersey is now thirty four years old which is an indicator of concern surrounding primary reliance on legal strategies for state school finance change. Unlike Serrano, the New Jersey Supreme Court school finance court decisions

(Abbott) included facilities, and gradually focused on pupil attainment (Goertz, 2006). In 1996, New Jersey started on a path toward aligning its finance system with state specified education goals. The New Jersey constitutional standard of "a thorough" education was defined by the legislature through fifty-six Core Curriculum Standards in nine academic content areas, plus five Cross-Content Workplace Readiness Standards. The state constitutional requirement of "efficient" education was defined by input standards such as class size. California policy has never formally acknowledged the linkage between its pupil attainment standards and its school finance system. So the California policy debate rarely acknowledges there is a separation, and the policy frame is to incrementally change the finance system without examining probable impact on pupil's reaching academic standards (Hanushek, 2003).

New Jersey's finance system encompasses components such as full-day kindergarten, summer school, and school-based health and social service programs. These state policies are not as well developed in California school finance. For example, California has no state funding for full-day kindergarten. New Jersey's basic school aid is called Core Curriculum Standards Aid (CCS), while California relies on a 1972 historical artifact called a "revenue limit." New Jersey costs for remedial programs are included in the state's finance foundation for each district, as well as more money in a state categorical program. Pre-school is fully state funded in the low-income cities that are part of the Abbott decision.

New Jersey's state aid is highly targeted. Consequently, poor-non Abbott middle property wealth districts were spending below the state averages, and considerably less

than Abbott urban/high-minority districts. By contrast, when there is a significant upturn in the economy, California has typically enhanced suburban expenditures through a categorical fund called "equalization aid," and has invested in "universally" applied programs for all school districts such as class size reduction. In 2006-2007, an additional $350 million was directed to the revenue limits of lower- spending school districts. In addition, the state created 22 new categorical programs in 2006 with no consistent fiscal equalization objective. New Jersey does not have California's voluminous categorical programs, but does specify that Abbott districts provide an uninterrupted language arts block of 80 to 120 minutes for all students in Grades 4-8, provide special supports for students reading below grade level, and some other specifications.

One cautionary implication for California is that New Jersey state finance policies provide significantly less money to the middle of the district distribution compared to the urban Abbott districts, or the high property wealth districts. California's basic aid districts have a similar advantage at the top spending range because they get to keep their own property tax, and not send any property tax revenue for state redistribution. Intense state finance targeting to urban districts in California could result in the same state finance distribution issues as New Jersey-e.g., comparatively low per pupil expenditures in middle spending districts. The 31 Abbott districts get slightly more than half of all the state money given to New Jersey's 616 school districts. New Jersey legislators are considering targeting more state aid to needy children throughout the state rather than just in Abbott districts.

New Jersey, however, has no policy or data linking the level and mix of inputs in its state foundation levels to its Core Curriculum Standards. But the performance gap between students in Abbott and non-Abbott schools did close somewhat on all state tested grades (2001-2005), particularly in the 4th Grade. NAEP scores show significant gap closing for the Abbott districts in 4th grade between the mid 1990's and 2005. The Abbott district state aid increases have been so large that these urban districts now spend more on average than the wealthy districts in the state! Moreover, New Jersey Abbott districts spend nearly twice as much per pupil as similar California urban districts. Critics contend that for all this new money Abbott district test score gains should be much higher (Evers and Clopton, 2006).

Implications from Arkansas, Wyoming, and Kentucky

Like New Jersey, lawsuits in these three states stimulated finance change in Arkansas, Wyoming, and Kentucky. All have some conceptual basis for their basic unrestricted local aid, unlike the California revenue limit. Unlike New Jersey, Arkansas and Wyoming allocated additional funding to schools based on adequacy studies using professional judgment and "evidence based" (Odden, Archibald, and Fermanich, 2003). All three states included assistance for facilities as well as operating funds. As Odden's (2006) paper points out, Kentucky framed finance reform as part of an effort to overhaul its entire education system following a court decision in 1991. The three states in the Odden paper raise serious issues on how increased state funding is allocated by local districts and schools. New state aid tended to be spent in traditional patterns. Will California schools use additional resources to optimally enhance pupil attainment? So

far, finance changes have been made in California without a direct linkage to academic standards or growth in pupil achievement. What types of school expenditures increase pupils' probability of meeting state academic standards? After 3rd Grade, California has the second largest class size of any state, but will class size reduction (CSR) in Grades 4-12 lead to more learning? Debates surround these questions with little consensus (Hanushek, 2006). In a two day period in 2006, however, the California legislature and governor created a new 2.5 billion categorical for low achieving schools that features reducing class sizes in grades 4-12 to 25 students.

A basic point Odden makes is the low probability that increased local spending on more of the same will help students learn more. The three states in his paper did not allocate increased state funds to anything much different than they were doing before. Odden's paper indicates that state flexible funding will be spent at the local level on school-level administration, specialist teachers in non-core subjects, instructional aides, and class size reduction. Perhaps new state incentives are needed to leverage different local spending patterns. Odden's paper suggests that if California state policy increases local spending substantially, it is desirable to include measures of how local districts and schools spend the new money.

As Odden stresses, Kentucky's initial state policy changes featured professional development and curriculum development that may have some impact on pupil learning. Kentucky's NAEP test scores increased faster than most states. In contrast to Kentucky, between 2000 and 2006 California made drastic cuts in professional development state categorical programs. There is some middle ground between over 100 categoricals and

complete local flexibility that may be the right framework for California. Odden suggests that more state prescription would enhance pupil outcomes. But his paper also supports that Kentucky enhanced pupil achievement by decentralizing implementation and relying on clear performance incentives and sanctions.

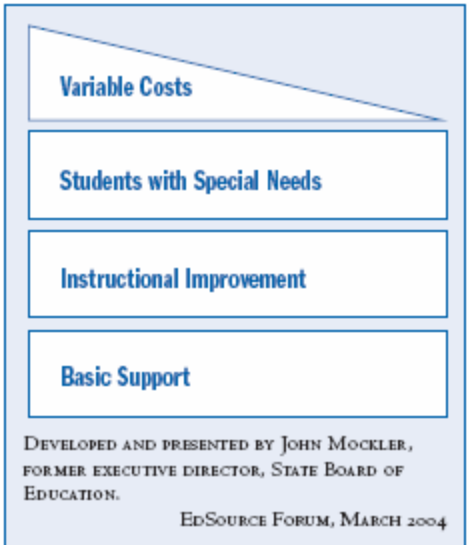
Policy Implications for Future California School Finance

California's overall state finance system has been in disarray for many years (Schrag, 2006). No fundamental solution to school finance can be effective without a concomitant overhaul of general state public finance. Long-run school spending changes cannot be divorced from state revenue issues and rethinking state relationships with cities and counties. Many large changes in California school finance have spillover effects on all of local government finance which is also influenced by Proposition 13 inspired state control. For a brief period in the early 1990s, California began to focus upon education as part of a broad framework to improve children's policies. Governor Wilson created a cabinet level Department of Children and Education. A promising program called "Healthy Start" began to link other children's policies (health, juvenile justice, parent education, neglect/abuse, etc.) to education. School sites became the locus for several types of children's services. Schools became eligible to provide Medicaid, and increased parent involvement. Counties and cities collaborated with school districts to better integrate services and policies such as overlapping confidentiality agreements.

But most of this momentum for integrated and more comprehensive children's policy waned in the late-1990s. The Cabinet Department dropped "Children" from its name and purview. Policy reverted to a view that schools on their own could enable all

children to reach proficiency (Rothstein, 2004). The voters defeated a universal preschool initiative in 2006 by over 60% negative. After-school programs are state funded through a successful initiative, but their impact on pupil achievement and improved instruction has not been evaluated.

California school finance improvement is both a general and specific problem. As the papers in this project demonstrate, the Serrano focus of equal district spending has not worked to create an overall effectual finance system, and is not attuned to a focus upon pupil outcomes. Moreover, the more promising proposals from the 20th Century do not have a pupil performance orientation either. For example, John Mockler recommended a four building block approach at the March 2004 EdSource Forum as follows below.



DEVELOPED AND PRESENTED BY JOHN MOCKLER, FORMER EXECUTIVE DIRECTOR, STATE BOARD OF EDUCATION.

EDSOURCE FORUM, MARCH 2004

According to this schematic, at the base of the revenue system is basic, general operating support. Next are funds targeted to aspects of instructional improvement over which the state believes it needs to retain control, such as textbooks and some professional development. The next block is those funds that are targeted to meet the special needs of specific groups of students, such as English learners and low-income students. On top are costs that vary based on unique district circumstances outside of a district's control, such as small size and unusual transportation costs.

According to a state comparative analysis, California has one of the highest academic standards of any state (Education Week, 2006. However, there needs to be some explicit linkage between state finance design and state academic standards policies.

There are other major state finance reform needs such as: better balance between local flexibility and state accountability, less complexity and more transparency, new teacher assignment, and local revenue raising options (EdSource, May 2004). California has not stuck with any incentive program based on paying schools or teachers more for

higher pupil outcomes. Perhaps teacher salary bonuses of ten to fifteen thousand would be more likely to change educator behavior, than the small increments provided in 1999-2001. But the first step must be to throw the current system out and not try to patch it. There is nothing much that is useful to start with in the current non-system. Serrano-driven revenue limit equity is outmoded as a key conceptual underpinning. The states bloated education code and categorical earmarks prescribe both school outcomes and how to reach those outcomes.

Public opinion studies by Rich Neimand (2006) suggest that California public opinion may respond positively to a comprehensive finance plan clearly focused on high standards and individual outcomes. California public believes school finance reform is a huge complex problem, and they find it difficult to grasp any solution. Incremental changes do not appear to elicit much public interest. New emotive symbols focused on children and not dollars may be needed to create a more positive public opinion. The public does not understand Proposition 98, or have a shared definition of what "fairness" means with respect to school funding. Neimand's public opinion survey analysis indicates to this author that Prop. 98 cannot be used as the key concept to convince the public about the need for major school finance reform.

The widely prevalent Serrano mentality held by many educators (e.g., prior court decisions require equality in revenue limit spending among districts) does not stimulate a strong positive public response either. The school finance debate needs to be reframed if it is to attract widespread supportive public opinion. Perhaps the projected slight decline in California's pupil enrollment for the next five years will provide some new money for

the state to begin this process. As Neimand suggests, a coherent comprehensive solution and compelling message has the best chance of convincing a skeptical, but concerned, public. Themes such as standards, accountability, transparency, and efficiency should accompany proposals for more money. Policy framing needs to emphasize children rather than the needs of the education system.

In sum, California's school accountability and finance systems that are both centralized should be linked to each other. The state cases by Odden and Goertz suggest that a more coherent state finance system designed to provide aligned incentives, strategic support, and capacity could enhance student achievement. Of course, this new system would need to be integrated with aligned district and school policies. Finally, the California public may respond more positively to systemic reform, rather than incrementalism, or the themes of the past such as equity.

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Appendix A: Educational Adequacy in New Jersey

Margaret E. Goertz

Education finance policy in New Jersey has been shaped by over 30 years of school finance litigation. Through its decisions in *Robinson v. Cahill* (1973-1976) and *Abbott v. Burke* (1985-2005), the justices of New Jersey's Supreme Court have defined the state's constitutional guarantee of a "thorough and efficient" education, set parameters for how the state's urban schools should be funded, and provided guidance on how education dollars should be spent in these communities (the so-called *Abbott* districts). These decisions provide a set of standards for an adequate education that may be applied to non-*Abbott* districts through new litigation (*Bacon v. NJ Department of Education*). The *Abbott* remedies and their implementation can also inform the development of adequacy policies in other states.

The first section of this paper provides a brief demographic and economic profile of New Jersey and its student population. The second section describes how New Jersey's courts have defined educational adequacy. The third section presents the key components of the state's current education funding system and how they reflect the state's conception of an adequate education. The fourth section looks at the impact of New Jersey's education funding system over the last 30 years, paying particular attention to the *Abbott* districts. The fifth section describes the role of state oversight in how *Abbott* districts spend their funds. The paper ends with a discussion of how New Jersey school funding policies do, or do not, address adequacy, including the use of education dollars in a sample of *Abbott* districts, and of what we know about achievement in the Abbott districts.

I. Demographic and Economic Profile

New Jersey is a small, densely populated state with a population that roughly mirrors the United States average. As shown in Table 1, New Jersey had around 8.7 million residents in 2005, with a density of 1,134 persons per square mile. In 2004, about 64% of New Jersey residents were of White, non-Hispanic origin, 15% were African-American and 15% were of Hispanic or Latino origin. The percentage of foreign born residents (17.5%) and residents who spoke a language other than English at home (25.5%) in 2000, however, exceeded the national average. This reflects a wave of immigration that accounted for half of New Jersey's population growth between 1990 and 2000 (Mackey, 2004).

New Jersey residents are also wealthier and better educated than the national average. In 2000, 30% of New Jersey residents over the age of 25 held a bachelor's degree or higher, compared to 24% nationally. Per capita income in 1999 was 125% of the national average; median household income in 2003 was 130% of the national average. In contrast, the poverty rate was only 8.9% compared to the national average of 12.5%. The wealth of New Jersey's families is reflected in the higher value of owner-occupied housing units: $170,800, or 143% of the national average. It is also reflected in the state's high level of spending on education. In 2003-04, New Jersey's public school revenue per pupil was $13,139, the second highest in the nation, and 140% of the national average (NEA, 2005, Table F-2). Using a different measure, current expenditures per pupil, New Jersey ranked 5th, spending $11,390 per pupil, or 138% of the national average (NEA, 2005, Table H-11).

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The racial/ethnic composition of New Jersey's schools, on average, generally reflects the state's population (Table 2). New Jersey's school population is 56.5% White, compared to a general population that is 63.8% White. The proportion of students who are African-American and Hispanic population is only slightly larger (about three percentage points each) than the population at large. State averages, however, obscure major disparities in wealth and demographics across New Jersey's 603 school districts. New Jersey contains some of the country's poorest and wealthiest communities, and some of the nation's most racially and economically isolated school districts. For example, New Jersey ranks 6th nationally on one measure of segregation, Black Exposure to Whites, (California ranks 4th), and ranks 4th on Hispanic Exposure to Whites (CA ranks 2nd) (Orfield and Lee, 2004). As shown in Table 2, students in the *Abbott* districts, which are the state's poorest urban communities, are, on average, 88% minority. In contrast, students in the rest of the state are, on average, 32% minority. The poverty rate in the *Abbott* districts (as measured by the percent of students receiving free or reduced school lunch) is four times as high as that of the non-*Abbott* districts (66% versus 17%). Put another way, while the Abbott districts enroll only 20% of the state's students, they educate half of the state's minority and poor children. (Asian students in New Jersey tend to be concentrated in non-urban districts, and are probably more likely to be from middle class families than in other states.)

The *Abbott* districts also have limited property bases. As shown in Table 2, the average per pupil property valuation in the *Abbott* districts was $270,000, about 40% of the state average. Although the average per pupil valuation for the non-*Abbott* districts

was $768,000, valuations ranged from an average of $306,000 in the state's poor rural communities to an average of over $1.2 million in the state's 217 wealthiest districts (Table 3). The property wealth disparity between Trenton ($125,000 per pupil), New Jersey's state capital, and Princeton ($1.1 million per pupil), a wealthy suburb only 12 miles away, is typical for the state. These large urban/suburban disparities have been a focus of the state's school finance litigation for the last three decades.

II. Defining T&E: The Role of the Courts

In 17 decisions handed down over the last 30 years, the New Jersey Supreme Court has sought to ensure that all students in New Jersey, particularly in their distressed urban areas, have access to a quality education.[4] Over these three decades, the Court has *defined* the state's constitutionally required "thorough and efficient" education, and developed *standards* for achieving a thorough and efficient education for all students. While many writers, researchers and policymakers view the New Jersey decisions as focused on equity, the Court has been concerned from the beginning with how to define and measure an adequate education for all children.

Article VIII of the New Jersey Constitution, adopted in 1875, calls for the legislature "to provide for the maintenance and provision of a thorough and efficient system of free public schools for the instruction of all children in the State between the ages of five and eighteen years." In 1970, four cities (East Orange, Jersey City, Paterson and Plainfield) challenged the constitutionality of the state's school funding system, arguing that large wealth-based variations in per pupil expenditures across the state's districts deprived students in low-wealth communities like theirs of a "thorough and efficient" (T&E) education. At the time, state aid represented 28% of K-12 education spending.

Robinson v. Cahill.

In 1973, the New Jersey Supreme Court ruled in favor of the plaintiffs (*Robinson v. Cahill*).[5] The justices situated their definition of a T&E education in both the past and the present. In an 1895 decision, the Court found that the T&E clause did not require the legislature to provide the same instruction to all children (in this case, equal access to a high school education). However, the State must afford each child "such instruction as is necessary to fit it for the ordinary duties of citizenship…with the view of securing *the common rights of all* before tendering peculiar advantages to any (emphasis added)."[6] The question before the Court in 1973 thus became what educational opportunities would be required to meet the common rights of all students in today's society. In its first *Robinson* decision, the Court developed an evolving and relative interpretation of T&E.

> The Constitution's guarantee must be understood to embrace that educational opportunity which is needed in the *contemporary setting* to

[4] For a more detailed discussion of these Court decisions, see Goertz and Edwards (1999).
[5] *Robinson v. Cahill,* 303 A.2d 273 (1973) (*Robinson I*).
[6] *Landis v. Ashworth,* 57 N.J.L.509, 512 (Sup.Ct.1895) as cited in *Robinson I* (1973), 295.

equip a child *for his role as a citizen and competitor in the labor market* (emphasis added) (*Robinson I*, 295).

The Court then determined that the constitutional requirement had not been met because of the wide disparities in per pupil expenditures. The justices noted that they used expenditures as a standard of educational opportunity because dollar input was plainly relevant and no other viable criterion for measuring compliance with the constitutional mandate had been presented in the case. The Court did not mandate expenditure equity, however. Local school districts could spend beyond that required for a T&E education (however defined by the State) as long as the excess spending did "not become a device for diluting the State's mandated responsibility" (*Robinson I*, 298).

In 1975, the New Jersey Court accepted the legislature's definition of T&E, a set of input and process standards included in the state's school finance reform law—the Public School Education Act of 1975 (more commonly called Chapter 212). These included: (1) instruction intended to produce the attainment of reasonable levels of proficiency in the basic communication and computational skills; (2) a breadth of program offerings designed to develop the individual talents and abilities of pupils; (3) programs and supportive services for all pupils, especially those who are educationally disadvantages or who have special educational needs; (4) adequately equipped, sanitary and secure physical facilities and adequate materials and supplies; (5) qualified instructional and other personnel; and (6) efficient administrative procedures. In ruling Chapter 212 facially constitutional in its fifth *Robinson* decision, the justices shifted their standard for judging adequacy from dollar disparities to *substantive educational content*.[7] Expenditures per pupil would now be relevant only if it impacted on the substantive education offered in a specific district.

Chapter 212 changed the state's funding structure from a minimum foundation to a guaranteed tax base formula, and over time, increased the state share from 28% to 40%. Most of the new aid went to lower middle income districts. The formula declared unconstitutional under *Robinson* had already targeted its aid on the lowest wealth communities, including most of New Jersey's cities (Goertz, 1978).

Abbott v. Burke.

In 1981, five years after the implementation of Chapter 212, the Education Law Center challenged the constitutionality of this funding law on behalf of students from four cities (Camden, East Orange, Irvington and Jersey City). Addressing the Court's new focus on substantive educational opportunities, the plaintiffs charged in this new case, *Abbott v. Burke*, that New Jersey's education finance system caused not only significant educational expenditure disparities, but vast programmatic differences between poor urban and wealthy suburban school districts. In the five *Abbott* decisions issued between 1985 and 1998, the Court expanded and more clearly elucidated its standards for a T&E education, especially as applied to disadvantaged students from poor urban communities.

[7] *Robinson v. Cahill*, 355 A.2d 129 (1976) (*Robinson V*).

Abbott I. In the first *Abbott* decision, handed down in 1985, the Court expanded the constitutional standard for a T&E education to one that assures *disadvantaged* students the opportunity to compete with children in property-rich districts, or contribute to the society entered by *relatively advantaged* children.[8]

Abbott II. In its second decision in 1990, the Court held that the input and process procedures put in place under Chapter 212 failed to measure whether students were receiving a T&E education as defined in *Robinson I*. The justices found that the State had not developed any standard for the breadth of curriculum that was to be offered, no standards of other educational inputs (such as staffing ratios, teacher experience or teacher training), and no standard of student, school or district performance beyond the State's basic skills test. In addition the State Department of Education did not evaluate the adequacy of a district's curriculum, the relationship of the curriculum to a T&E education, or the quality of any offering. Therefore, in the absence of clear measures, the Court looked at both the absolute level of education in the poor urban districts and a comparison of educational programs, personnel and facilities with those in affluent suburban districts. It found both deficiencies and striking disparities in these areas.

The Court also determined that the adequacy of education provided by a school district could not be judged solely by students' performance on basic skills tests. The Court further expanded its definition of T&E to include the ability to fulfill one's role as a citizen, to participate fully in society, in the life of one's community, to appreciate music, art and literature, and to share that with friends.[9] This broadened definition of T&E will be used by the State Board of Education in subsequent litigation (*Bacon v. New Jersey Department of Education)* in its determination of whether non-*Abbott* districts are providing an adequate education to their students.

The Court then ordered the legislature to design a new or revised funding system that would:

1. Equalize spending for the *regular education program* between poorer urban districts and property-rich districts[10];

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[8] *Abbott v. Burke*, 495 A.2d 376, 390 (1985). (*Abbott I)*.
[9] *Abbott v. Burke*, 575 A.2d 359, 397 (1990). (*Abbott II*)

[10] "Poor urban districts" (subsequently called the Abbott districts) were defined by the Court as the 28 districts that were classified by the New Jersey Department of Community Affairs as "urban" communities and that fell within District Factor Groups (DFG) A and B. "Property-rich" districts were those assigned a DFG of an I or J. DFGs are created by the New Jersey Department of Education from a composite measure of a community's social and economic resources, including occupational and educational background, per-capita income and mobility, using data from the US Census. At the time of the *Abbott II* decision, DFGs were used to report state test scores so that comparisons

2. Provide additional funds to meet the *special educational needs* of the urban districts in order to redress their disadvantages; and

3. Assure that funding for poor urban districts is certain every year and does not depend on the budgeting or taxing decisions of local school boards.

The Court set out criteria for identifying poor urban and property-wealthy districts. It left the issue of facilities to a later decision.

Abbott III[11]. *The Abbott III* and *IV* decisions addressed the constitutionality of the Quality Education Act of 1990 (QEA) and the Comprehensive Educational Improvement and Financing Act of 1996 (CIEFA), respectively, as applied to the *Abbott* districts.

The QEA, enacted one month after the *Abbott II* decision, was designed to increase the equity of the state's funding system, while establishing a floor of fiscal support for an adequate educational program through a foundation aid program. The initial foundation level was set at about the 65th percentile of spending, an amount that the formula designers considered generally sufficient based on their review of educational offerings and spending patterns in many suburban districts. This amount was subsequently lowered to about the 60th percentile, however, in the face of state budget constraints and political pressure for property tax relief. The QEA also increased funding for programs for at-risk students and special education and provided state aid for half-day preschool and full day kindergarten programs through the foundation formula. The Abbott districts received an additional $653 million in aid between 1990-91 and 1993-94, a 61 percent increase. But while spending in the Abbott districts increased an average of $1800 per pupil, the spending gap between the poor urban and wealthy suburban districts remained substantial—$1200 per pupil (Table 7).

The Court determined that the QEA did not meet the spending parity requirement of *Abbott II*, nor did it adequately provide for the special education needs of urban students. The justices were especially troubled by the State's failure to identify, develop or monitor programs designed to address the special educational needs of the *Abbott* students. The Court once again returned to case to the State for a remedy.

Abbott IV. [12] In December 1996, the legislature enacted CEIFA. This law, which is still in effect, represented a major change in school finance philosophy. The State purported to link state support of K-12 education with what it would cost for students to meet specified educational goals. A "thorough" education is defined by a set of outcome standards: 56 Core Curriculum Standards in nine academic content areas and five Cross-Content Workplace Readiness Standards adopted by the State Board of Education in May

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could be made within similar socio-economic status categories. The legislature subsequently added two more Abbott districts in its enactment of the Quality Education Act of 1990.

[11] *Abbott v. Burke*, 643 A.2d 575 (1994). (*Abbott III*)

[12] *Abbott v. Burke*, 693 A.2d 417 (1997). (*Abbott IV*)

1996.[13] An "efficient" education is defined as a set of input standards, such as class size, administrators/teachers per student, schools per district, and types and amount of classroom supplies, services and materials that are considered sufficiency to achieve the content standards. As described in a later section of this paper, CIEFA's foundation level was based on a model educational delivery system that incorporated these input standards.

In its fourth *Abbott* decision, issued in 1997, the Court accepted the Core Curriculum Standards (CCS), coupled with performance assessments that measure educational achievement, as a reasonable legislative definition of a constitutional T&E education. But, the Court argued, standards alone do not ensure a substantive level of achievement. "Real improvement still depends on the sufficiency of educational resources, successful teaching, effective supervision, efficient administration, and a variety of other academic, environmental, and societal factors needed to assure a good education." [14] Although CEIFA attempted to link funding with outcome standards, it fell short as applied to urban districts for four reasons: (1) the State had failed to show how the model delivery system underlying the foundation amount was tied to the CCS; (2) the State had not yet established either assessments or performance standards linked to the CCS; (3) the State's model of an "efficient" district was not based on the characteristics of the *Abbott* districts; and (4) CEIFA, like the QEA, failed to address sufficiently the special educational needs of students in the *Abbott* districts.

The Court concluded that it was left once again without a constitutional measuring stick to determine the level of resources needed to ensure equal educational opportunity in poor urban communities other than the inputs of the State's wealthy districts. It ordered parity in regular education funding between the *Abbott* districts and the state's wealthy suburban districts for the 1997-98 school year. But, the Court suggested that parity funding was an interim measure, to remain in place until the state can "convincingly demonstrate…that a substantive thorough and efficient education can be achieved in the [*Abbott* districts] by expenditures that are lower than parity."[15] The Court also ordered the State to monitor, supervise and audit the use of the additional parity funds to assure they supported achievement of the CCS.

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[13] CIEFA referenced standards in seven academic areas: mathematics, science, language arts literacy, visual and performing arts, social studies, comprehensive health and physical education, and world languages. In 2003-04, the State Board of Education updated these standards and added two more-- technology and career education; and consumer, family and life skills. The cross content workplace readiness standards are: apply critical thinking, problem solving, and decision making skills; use technology, information and other tools; develop career planning and employability skills; acquire the skill of self-management, including goal setting, efficient use of time and working cooperatively with others; and acquire knowledge of safety principles and basic first aid.

[14] *Abbott IV*, 428-429.

[15] *Abbott IV*, 442.

In this decision, the Court also brought the quality of facilities under the constitutional umbrella of T&E. Finding that CEIFA failed to address the documented dilapidated, unsafe and overcrowded facilities in the urban districts, the Court ordered the State to provide facilities "that will…enable students [in the *Abbott* districts] to achieve the substantive standards that now define a thorough and efficient education."[16] Finally, frustrated with the inability or unwillingness of the State to undertake studies of supplemental programs for urban students, the justices remanded the case to the Superior Court to determine appropriate judicial relief in the areas of supplemental programs and facilities.

Abbott V. In 1998, the Supreme Court issued a remedial order addressing the special educational and facility needs of *Abbott* students. The Court called for:

- the implementation of proven, research-based whole school reform designs in all 319 *Abbott* elementary schools, with Success for All as the presumptive model;
- full-day kindergarten;
- half-day preschool programs for 3 and 4 year-olds in the schools and in cooperation with or the use of existing early childhood and day-care programs in the community;
- off-site coordination and referral for social and health services;
- security, technology, alternative school, and school-to-work programs as proposed by the Department of Education;
- supplemental funding for additional educational programs *based on need*, including summer school, added security, and school-based health and social service programs; and
- funding of the complete cost of addressing facilities deficiencies and the construction of additional classrooms needed to serve current and project student populations.[17]

Abbott X. In 2003, the NJDOE appealed to the State Supreme Court to lift many of the *Abbott* V mandates, including the whole school reform (WSR) requirement and several support positions, such as social workers and family liaisons. The Court rejected this request in its *Abbott X* decision, reaffirming the use of a WSR model it most situations, and calling for the continuation of most of the other *Abbott V* remedies.

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[16] *Abbott IV*, 438.

[17] *Abbott v. Burke*, 710 A.2d 450 (1998). (*Abbott V*)

In its *Abbott X* decision,[18] the Court specified a set of programs and services that must be implemented in all Abbott districts. This decision clarified and expanded the initial list in *Abbott V*. The programs and services include:

- research-based WSR models in all 319 *Abbott* elementary schools, with Success for All (SFA) as the presumptive model, unless a school was designated as a low or high performing school based on 2002 state test scores,[19]
- reduction of class sizes to 21 in grades K-3, 23 in grades 4 and 5, and 24 in grades 6 and beyond;
- full day kindergarten;
- half-day preschool programs for 3 and 4 year-olds;
- an early reading literacy (K-3) program that includes a 90 minute reading block, regular progress assessment of students and an instructional facilitator;
- reduced reading class size and one-to-one tutoring in SFA schools, and in non-SFA schools, based on demonstrated need;
- provision of "exemplary" music, art and special education programs;
- a parent liaison and parent representation in school management in elementary schools;
- a family support team (composed of a social worker, counselor, school nurse and parent liaison) in elementary schools, and an on-site health and social services coordinator in middle and high schools;
- an on-site clinic to provide social and health services where such services are not available in the community;
- an adequate technology program that includes a library media specialist, a technology coordinator to instruct staff and students, and a ratio of one computer per five students;
- operation of a comprehensive violence prevention and security program, based on demonstrated need;
- a program that ensures that each high school student is prepared to master college preparatory work upon graduation;

[18] *Abbott v. Burke*, 832 A.2d 891 (2003). (*Abbott X*)

[19] A low performing school (about 50 schools) was one in which half of the general education students did not pass the state language arts assessment. Their programs would be subject to review by an outside team. A high performing school (about 60 schools) was one with a passing rate equivalent to or better than the state average. They would be allowed to exit the WSR model with notification to the NJDOE.

- dropout prevention and alternative education programs in middle and high schools;
- adequate professional development for practitioners;
- provision of an adequate extended day/year program, if documented as needed;
- provision of a nutritional food program; and
- school-based management and budgeting. (*Abbott X*, Chart of Supplemental Programs).

The justices continued to gave schools and school districts the right to request and obtain other supplemental personnel if they demonstrated the need (supplemental programs).

Bacon v. New Jersey Department of Education[20]

In *Abbott II*, the Court limited its ruling to the state's poorest urban districts. It left the constitutionality of spending disparities in poor rural and middle income districts unresolved, awaiting proof of the negative impact of unequal funding on these students' educational opportunities. In 2000, 17 poor rural districts sued the State, claiming that they also serve disproportionate numbers of poor students and have insufficient funds to support their public schools. They asked to receive state aid comparable to the Abbott districts. On average, the State's poor rural districts spent $1900 per pupil less than their wealthy neighbors in 2000-01, and $1,000 per pupil less than the state average, in spite of above average tax rates. In 2002, the Office of Administrative Law recommended extending the Abbott designation to six of the 17 *Bacon* districts, but the Commissioner of Education applied that recommendation to only one district—Salem City. On appeal to the State Board of Education, the State Board called for an assessment of the educational needs of the districts, and further directed the Commissioner to examine the operation of the current funding system and to recommend "the educational components essential to the establishment of a unified system for public education" (*Bacon v. NJ Department of Education* as cited in Liss, Moscovitch, Sadovnik and Tractenberg, 2006).

This decision has the potential to start new discussions about the definition, components and cost of a "thorough and efficient" education.

III. Defining T&E: The Current School Finance System

The Comprehensive Educational Improvement and Financing Act of 1996 (CIEFA) remains the primary vehicle for allocating state aid to local school districts. The service delivery model that underlies the foundation formula (Core Curriculum Standards Aid) is assumed to provide an adequate level of education to students without special needs. The legislature has enacted additional state aid programs over the years. The most significant of these programs is Education Opportunity Aid, which comprises

[20] *Bacon v. NJ Department of Education*, N.J. State Bd. Dkt. No. 4-03 (N.J. State Board of Education, January 6, 2006.

Parity Aid and Supplemental Program Aid for *Abbott* districts and was enacted in direct response to the *Abbott IV* decision. The state also funds School Construction and Debt Service and pays the employer's share of teacher pension and social security and post-retirement medical costs. Only the Core Curriculum Standards Aid is wealth-equalized. Categorical funding is driven by measures of student and/or district need. This enables the State to provide some level of state aid (particularly transportation, special education and school construction aid) to all school districts. .

As shown on Table 4, the major education funding programs are:

- Core Curriculum Standards (and related) Aid, which supports school districts' regular education budgets;
- Demonstrably Effective Program Aid (DEPA), which supports programs for educationally disadvantaged students;
- Early Childhood Aid;
- Special Education;
- Transportation;
- School Construction and Debt Service; and
- Teacher Retirement (pension, retirement health and Social Security).

Core Curriculum Standards Aid

Core Curriculum Standards (CCS) Aid is a foundation formula that is designed to enable local school districts to deliver the state's Core Curriculum efficiently. CCS aid supports the regular education budget; separate categorical aids fund programs for special student needs. In 2005-06, CCS aid ($3.080 billion) represented 33% of total state aid (40% without retirement); and 38% (45% without retirement) when supplemental CCS aid and stabilization aids are included.

Foundation formula. The foundation amount is based on a model district developed by the New Jersey Department of Education in its *Comprehensive Plan for Educational Improvement and Financing* (May 1996). The model district has an assumed enrollment of 3,075 students in three elementary schools, one middle school, and one high school, with no more than 10 percent of the students classified for special education services other than speech.

The model also assumes:

- Elementary schools of 500 pupils each in grades kindergarten (half-day) through five;
- A middle school of 675 pupils in grades six through eight;
- A high school of 900 students;
- Class sizes of 21 for grades K through three; 23 for grades four and five; 22.5 in middle school; and 24 in high school
- Two guidance counselors, a nurse, and two media services/technology specialists for the middle school; the number of guidance counselors and nurses doubles in the high school.

- Each school has principals, assistant principals, and clerical staff considered appropriate to its size, and one security guard. Provision is made for a central office staff.
- Other inputs include one computer for each five students, with a five year replacement cycle; released time for professional development for teachers; and allowances for co-curricular and extracurricular activities ($23 per elementary pupil, $137 per middle school pupil, and $434 per high school pupil).

Although no specific basis is cited in the *Plan* for the specific amounts of the various inputs, they arguably reflect patterns in suburban districts in what is a generally suburban state.

The cost of the different elements of the model delivery system were based on state average costs for 1994-95 and projected to 1997-98 dollars (NJDE 1996, p. 3). The result was a basic foundation, or T&E amount, of $6,720 for pupils in grades 1-5. Grade level weights were applied to other grades: Kindergarten: 0.5; grades 6-8: 1.12; and high school: 1.20. The T&E budget is allowed to vary by plus or minus 5%, reflecting cost differences across the state.

The state is supposed to revisit the foundation level every two years in a Report on the Cost of Providing a Thorough and Efficient Education. In intervening years, the state is supposed to adjust the T&E amount for inflation by the average annual increase in the CPI for the New York City and Philadelphia areas. Although the T&E amount for elementary grades had increased to $8,313 by 2003-04 (NJDOE, 2002), the state stopped recalculating CCS aid in 2002-03. Due to severe budget shortfalls, the legislature has frozen most state aid at the 2001-02 levels, making some minor adjustments through footnote language in each year's annual appropriations act. The state aid freeze left the 2001-02 T&E amounts in place: $7,913 per pupil for elementary grades, $8,195 for middle school and $8782 for high school.

The required local share for all districts is calculated using both property and income wealth, although property taxes are the only general purpose taxes available to local school districts in New Jersey. Local fiscal capacity is measured by weighting property wealth and personal income equally, a provision carried over from the QEA. No specific tax rates are specified in the formula; rather, tax rates or "multipliers" are calculated annually so that a defined amount of state aid is distributed and the capacity measures are weighted equally. Both income and property tax data are obtained from state tax records.

Supplemental CCS Aid. Supplemental CCS aid provides tax relief to districts with high (40% or more) concentrations of low-income pupils, tax rates that exceed the state average by 110%; and property wealth less than twice the state average. This aid is intended to offset a portion of the required local share. The state allocated $252 million in this aid in 2005-06, about 2.7% of total state aid.

Stabilization Aids and Stabilization Aid Growth Limits. Stabilization aids and stabilization aid growth limits are intended to moderate the effects of abrupt changes in state aid entitlements from year to year. Districts subject to reductions in state aid will receive stabilization aid to offset a portion of this reduction. Districts that were projected to have large increases in state aid with the implementation of CEIFA had their state aid growth limited to 10% or the rate of growth in the districts enrollment, whichever was greater. Taken together, these aids comprised $77 million, or about 1% of total state aid.

Other adjustments. To offset some of the negative effects of freezes in CCS aid, the legislature has appropriated additional aid through language in the appropriations act. In 2005-06, the state allocated $16 million in Aid for Enrollment Adjustments and $90 million in Additional Formula Aid (which gave non-Abbott districts a 3% increase in their CSS aid).

Education Opportunity Aid (*Abbott* Aid)

Education Opportunity Aid comprises Abbott Parity and Additional Abbott Aid. These two aid programs, which are outside of the CEIFA formula, were enacted in response to the *Abbott IV* court decision mandating expenditure parity between the *Abbott* districts and wealthy suburban districts, and allowing Abbott districts to request supplemental funding to meet additional student needs. In 2005-06, the state appropriated $1.52 billion in Education Opportunity Aid, about 16% of total state aid.

Parity aid is the difference between an Abbott district's per pupil regular education budget (basically the sum of its local levy, CCS aid and CCS supplemental and stabilization aids) and the average per pupil regular education budget in the state's highest SES school districts. Preschool and one-half of full-day kindergarten enrollments are not included in this calculation. In 2005-06, the parity benchmark was $11,700 per pupil, and Abbott districts received about $925 million in parity aid.

Abbott districts must request Additional Abbott Aid, showing proof that additional funds are needed to meet the special educational needs of their districts. The NJDOE has process for reviewing and approving these requests. Funds allocated under this aid program must be spent for the approved purpose and accounted for in a separate revenue fund. About $600 million was appropriated for Additional Abbott Aid in 2005-06.

Demonstrably Effective Programs Aid

Under the QEA, districts received aid for pupils at risk of educational failure; aid was allocated according the number of pupils eligible for the federal free lunch/free milk program. CEIFA replaced At-Risk aid with two aid programs. First, CEIFA included the cost of remedial education programs in the foundation amount, supposedly through the increased number of staff allotted to schools. Second, it created a new category of aid, Demonstrably Effective Programs Aid (DEPA), to further assist districts with concentrations of school or district poverty.

Under DEPA, the amount of per pupil aid that districts receive varies by poverty concentration. Districts receive $463 per pupil based on 2001-02 enrollments (the last year for which the NJDOE calculated this aid) for students in schools with more than 40 percent low-income students. Districts whose schools have between 20 percent and 40 percent low-income students received $327 per pupil for students in those schools. Districts in which low-income pupils comprise between 5 percent and 20 percent of the total population receive $369 for each low-income pupil in "Instruction Supplement Aid." "Low-income pupils" are defined as those coming from households with income at or below 130 percent of the federal poverty guidelines. Aid must be used for programs such as alternative or community schools, class size reduction, parent education, and telephone, teleconference, and video tutoring. These programs are subject to separate budgeting, accountability, and monitoring requirements. Total DEPA aid was $215 million in 2005-06, or about 2.3% of total state aid. About 61% of this aid is allocated to Abbott districts. These aid amounts have been frozen since FY2002.

Early Childhood Aid

Early Childhood Program Aid (ECPA) is intended to enable districts with high concentrations of low-income pupils to provide full-day kindergarten, preschool classes, and other early childhood programs and services, which were included in the foundation program under the QEA. Districts with between 20 percent and 40 percent low-income students received $506 per district pupil in aid based on 2001-02 enrollments (the last year for which the NJDOE calculated this aid); those with more than 40 percent low-income students received $817 per pupil. Districts had to submit a plan to establish preschool and full-day kindergarten for all four- and five-year-old children by the 2001-2002 school year. For the first four years of the program, districts could use aid to construct facilities, and districts implementing an approved plan could use ECPA aid for demonstrably effective programs prior to establishing early childhood programs. The state has allocated $330 million a year in ECPA aid since 2001-02, the year this aid was frozen, or about 3.6% of total state aid. About 70% of ECPA is allocated to Abbott districts.

In 2002-03, the state enacted the Abbott Pre-school Expansion Aid program to fund the increase in the approved budgeted costs from 2001-02 to 2005-06 for the projected expansion of preschool programs in the *Abbott* districts. *Abbott* districts must provide full-day preschool to three and four-year old children, and in its *Abbott VIII* decision, the Court required that the NJDOE and the Abbott districts be more aggressive in seeking out children to be enrolled in Abbott preschool programs.[21] Abbott preschool enrollments are projected to be 43,000 students in 2005-06, an increase of over 13,000 pupils since 2002-03 when Abbott Preschool Expansion Aid was first included in the budget (New Jersey Legislature, 2006). Aid for this program grew from $95.5 in 2002-03 to $192.4 million in 2005-06. In 2004-05, the state initiated a small Early Launch to Learning Initiative (ELLI) to expand preschool access for four year-olds in non-Abbott

[21] *Abbott v. Burke,* 790 A.2d 842 (2002). (*Abbott VIII*)

districts.

Special Education

Special education represents 10% of the total state aid budget. Aid for special education is based on excess cost factors that reflect additional costs associated with educating children with disabilities. CEIFA groups a previous set of partly diagnostic and partly service categories into four tiers, although the assignment to a tier is still related to a diagnosis. Tier I aid ($310 per pupil, the cost factor for 2001-02) is paid for students receiving related services. Tier II pupils, who received $3260 per pupil in 2001-02), have mild disabilities; Tier III pupils with moderate disabilities are funded at $5,975 per pupil. Tier IV pupils receive intensive services, such as those for autistic or chronically ill individuals, and are funded at $13,037 per pupil. Costs of speech correction services and child study teams are included in the foundation aid amount. To counter an alleged overuse of the perceptually impaired classification, a limit has been placed on the percentage of a district's students who may be so classified. In addition, a district may request aid, either on an emergency or a reimbursement basis, for pupils whose placement cost exceeds $40,000. Special education aid was frozen at $896 million in 2002-03, and special education cost factors have not been changed since 2001-02. The state has appropriated an additional $52 million in Extraordinary Special Education Costs aid since 2003-04.

Transportation Aid

Transportation Aid is calculated according to an expected cost formula, with an incentive factor for vehicle capacity utilization applied to the transportation of regular public and nonpublic school pupils plus those special education pupils who do not have special transportation requirements. The incentive factor does not apply to the transportation of special education pupils with special requirements.

The only variables in the formula are the number of pupils eligible for transportation (2 miles for elementary students; 2 1/2 miles for high school students) and the average distance students are transported. The coefficients in the aid equation assume that the fixed pupil costs are more than four times higher for special education pupils with special requirements than for regular pupils (Goertz, 1998)

School Construction and Debt Service
[Is this information needed?]

Teacher Retirement

New Jersey teachers belong to the state Teachers Pension and Annuity Fund (TPAF), and the state pays the employer's share of TPAF and social security and for teachers' post-retirement medical. In 2005-06, the total cost for these programs was $1.52 billion, or about 16% of total state aid. Social security payments accounted for about $656 million and Post-retirement Medical for another $685 million. The cost of

the Post-retirement Medical program has risen rapidly, from $292 million in 2002-03 (the first year that the budget broke these expenditures out separately). State contributions to TPAF have fluctuated over time. At the height of the stock market boom in the 1990s, the state borrowed against the state's pension assets. Since that time, the state has had to pay debt service on the pension bonds ($89 million in 2005-06), but have made no or minimal ($94 million in 2005-06) contributions to the pension system generally. As a result, TPAF (as well as the state's other pension system, PERS) is under-funded. Governor Corzine's FY07 budget includes an $661 million payment to TPAF.

IV. Changes in State Aid System over Time

New Jersey's school finance system has undergone four major changes in the last 30 years: the Public School Education Act of 1975 (Chapter 212); the Quality Education Act of 1990 (QEA), the Comprehensive Educational Improvement and Financing Act of 1996 (CEIFA) and the Abbott parity aid and related remedies (1997). The analyses that follow look at changes in state aid across these four laws, and resulting changes in education expenditures and school tax rates. Trends in state aid will include all categories of aid. Analyses of school district spending will be limited to regular education spending, since this has been the focus of both the Court's and CEIFA's definition of an adequate education.

Trends in State Aid

Tables 5 and 5-A show changes in state aid to education between 1975-76, the year prior to the implementation of Chapter 212 through 2005-06, the latest year for which school expenditure data are available. The interim years reflect the effects of the changing school finance systems over the 30 year period: initial implementation (1977-78), mid-point (1984-85) and ending (1989-90) years of Chapter 212; the mid-point (1993-94) and last year (1996-97) of QEA; and implementation of both CEIFA and Abbott parity aid (2000-01 and 2005-06). These are also years for which the author had statewide databases.

Total state aid for education increased nearly twelve-fold ($8.5 billion) in nominal dollars and tripled ($6.4 billion) in real (2005) dollars between 1975 and 2005. Each law infused substantial amounts of new dollars into the education system. Chapter 212 initially increased state aid by 50% (1977-78), followed by steady growth in aid through the 1980s—an increase of 343% in nominal and 90% in real dollars between 1975-76 and 1989-90. Districts received an additional $1 billion under QEA (1993-94) before allocations under that formula were frozen. By 1996-97, state aid had decreased in real dollar terms. State aid grew steadily under CEIFA until 2001-02 when major categories of aid, such as equalization and categorical aid, were once again frozen. By 2005-06, state aid had nearly doubled over QEA in nominal dollars, and increased 52% in real dollars. As will be discussed shortly, most of this growth was in Abbott aid, categorical aid and teacher retirement.

To put these numbers in perspective, state aid as a percent of the total state budget has remained relatively constant since the enactment of Chapter 212 in 1976-77, hovering between 28% and 32% of total state spending (Tractenberg, Liss, Moscovitch & Sadovnik, 2005; author's own calculations). Enrollments, however, followed the national trend, declining from about 1.4 million students in 1975-76 to a low of about 1.1 million students in 1989-90, and then growing back to over 1.4 million students in 2005-06.

As shown in Table 5-A (CPI adjusted), increases in state aid have not been uniform across the major categories of aid over the last 30 years. In real dollars, equalization aid (aid allocated to districts through equalization aid formulas, minimum aid and safe harmless formulas) increased $2 billion, or 123%. All of this growth occurred between 1975-76 and 1993-94, however. In the last ten years, inflation has erased any increases in equalization aid that districts received under CEIFA. Categorical aid grew $1.7 billion in real dollars over the last 30 years, a 350% increase, driven largely by growth in special education funding ($710 million) and the addition of compensatory education ($215 million) and early childhood education ($335 million) aid programs. The creation of Abbott parity, supplemental and pre-school expansion aids accounts for another $1.6 billion, while teacher retirement costs grew by $800 million. .

As a result of the differential changes in aid categories, equalization aid dropped from about 50-55% of total state aid (1975-76 through 2000-01) to 38% currently (2005-06). Categorical aid's share of the total grew from 17% to 24% over the thirty years, while teacher retirement dropped from 25% to 16%. Abbott aid, which did not exist until 1997-98, now accounts for 18% of total state aid.

The Abbott districts have benefited from increases in categorical aid (particularly compensatory and early childhood education aids) and the implementation of Abbott parity and supplemental aid. In 1989-90, Abbott districts received about 42% of total state operating aid (without school construction and teacher retirement). This percentage increased to 48% in 1993-94 under the QEA (Firestone, Goertz & Natriello, 1997) and rose to 57% by 2005-06 (New Jersey Legislature, 2006).

Trends in Education Spending: Analysis by Wealth Septile[22]

Figure 1 and Tables 6 and 6A show trends in per pupil education spending for the regular education program over the last 30 years. Districts are grouped into seven wealth septiles of approximately equal numbers of students based on equalized valuation per pupil.[23] The wealth groups were reset each time; thus, a district may not be in the

[22] Appendix Table A-1 includes all data from which these analyses are drawn for the years 1984-85 through 2005-06. Data for 1975-76 and 1977-78 are taken from Goertz, 1983.

[23] The author has used septiles to analyze the allocation of education funds in New Jersey since 1975. Septiles were chosen over deciles because in 1975 one large urban district, Newark, educated about 7% of the state's students and would have constituted most of its decile.

same interval across the thirty years if its per pupil property wealth changed at a rate substantially different from that of other districts in its septile. The analyses include 551 to 553 of the state's 603 school districts. I have excluded the 21 county vocational, eight county special services (e.g., special education), and 23 non-operating[24] districts because of their unique characteristics. Abbott districts are generally located in Septiles 1 and 2; in 2005-06, for example, 94% of students in Abbott districts were in these two septiles.

Overall, per pupil spending increased $6013, or 116%, in real dollars between 1975-76 and 2005-06. As shown in Figure 1, the trajectory of growth was similar for Septiles 3, 5 and 7, with each group doubling their spending over the 30 year period. Spending in the lowest wealth Septile 1, however, grew by 170%, resulting in that group spending more than the wealthiest group of districts in 2005-06.

Chapter 212 (1975-76 to 1989-90). Focusing on Table 6A (CPI adjusted), we find that per pupil spending grew on average nearly $3700 in real dollars, or 71%, between 1975-96 through 1989-90, driven by the large increase in state aid (90%) under Chapter 212 and a strong economy in the 1980s. However, growth was considerably slower in the two lowest wealth categories (Septiles 1 and 2) and faster in the two highest wealth categories (Septiles 6 and 7), as increases in state aid were insufficient to offset wealth-driven increases in spending in the high wealth communities. Thus, disparities in spending between Septiles 1 and 7 grew from $1249 to $3295 per pupil during this 14 year period. Spending disparities among the middle wealth (Septiles 3 to 5) districts widened as well.

Chapter 212, a guaranteed tax base formula, equalized tax rates more than spending (see Table 8 and Figure 2). By 1989-90, tax rates were, on average, generally comparable for districts in Septiles 2 through 5. High wealth districts were still able to raise considerably more funds per dollar of tax rate than lower wealth districts, however. As shown in Table 9, districts in Septile 7 raised $18,000 per $1.00 of school tax rate, compared to only $6,629 in Septile 1.

QEA (1990-91 to 1996-97). In response to the *Abbott* II decision, Chapter 212 was replaced with a foundation formula, set at about the 60th percentile of spending (see p. 5 of this paper). The QEA allocated about half of new aid dollars to the then recently designated Abbott districts, driving up both state aid and spending in the two lowest septiles of districts between 1989-90 and 1993-94 and resulting in a reduction in the spending disparities between the lowest and highest wealth septiles—from $3295 to $2081 per pupil. Increases in spending in the other septiles came primarily from local revenues. Funding for the QEA was frozen in 1994, and per pupil spending adjusted for inflation remained flat (or even declined) between 1993-94 and 1996-97. Districts had to run in place to accommodate enrollment growth during a stagnant economy. As a result, school tax rates, which had declined during the 1980s, rose across the board.

[24] Non-operating districts are local school districts that do not operate schools. They tax for education and receive state aid for their resident students, and who they send to neighboring school districts under negotiated rates.

CEIFA and Abbott Aid (1997-98 to 2005-06). As with previous school finance reform laws in New Jersey, CIEFA allocated more aid to school districts in its initial years. A small feast was followed by a large famine, however, as most categories of non-Abbott aid have been frozen since 2001-02. As with the QEA, most of the new CEIFA dollars were allocated to Septiles 1 and 2, and to a lesser extent to Septile 3. The new Abbott parity aid is also reflected in increased spending in Septiles 1 and 2. Spending in middle and higher income districts continued to remain flat when adjusted for inflation between 1996-97 and 2000-01. By 2000-01, only $1000 separated the lowest and highest wealth districts. This difference was erased by 2005-06, due mostly to a large infusion of Abbott parity and supplemental education aid. Spending distributions now represent a U-shaped curve, with the poorest and wealthiest districts spending the most and having the lowest tax rates, and the middle income districts spending, on average, about $2000 per pupil less with tax rates that are 70% higher (see Table 8). As a result, the lowest and highest wealth districts raised $16,000 per dollar of school tax rate in 2005-06, twice as much as districts in Septiles 3 through 5 (Table 9). This pattern becomes more apparent in the next round of analyses that separate out the Abbott districts.

Trends in Education Spending: Breaking Out the Abbott Districts[25]

I did not have databases that would allow me to separate out the Abbott districts in the 1970s. I can conduct these analyses starting in 1984, however. In this section, I removed the Abbott districts from their respective wealth septiles and created a new comparison group of the 30 Abbott districts.[26] I then collapsed the seven septiles analyzed above into three broader wealth categories: low wealth districts (Septiles 1 and 2, minus Abbott districts); middle wealth districts (Septiles 3 through 5, again minus any Abbott districts); and high wealth districts (Septiles 6 and 7).

Figure 3 and Tables 7 and 7-A show the results of these analyses for school spending. The pattern of growth for the Abbott districts becomes clear. During the mid- to late-1980s, the Abbott districts spent a few hundred dollars per pupil more than the poor, non-Abbott districts (low wealth), and $700 to $800 dollars per pupil less than the middle wealth districts (Table 7-A). As described in the septile analysis, the disparity between the low wealth, Abbott and middle income districts and the wealthy districts grew during this time. By 1989-90, about $2600 per pupil separated the average Abbott and average wealthy district. The early years of the QEA boosted spending in both the Abbott and other low wealth districts, while per pupil spending was stagnant in the high wealth communities. By 1996-97, frozen state aid, stagnant tax bases, and growing enrollments had created a situation where only the Abbott districts were considerably better off than seven years earlier. In this year, the Abbott districts were spending only

[25] Appendix Table A-2 includes all data from which these analyses are drawn.

[26] In 2003, the state added a 31st Abbott district, Salem City. Because this is a recent event, I did not include this district in the Abbott category. Since Salem City is small (1200 students), this exclusion will not affect the findings.

$1000 per pupil less than the wealthy districts, and the Abbott districts were outspending the average middle income district.

CEIFA provided minimal increases in equalization aid (adjusted for CPI) to low and middle income districts between 1996-97 and 2000-01. Aid to Abbott districts increased due largely to the implementation of parity aid. In the last five years, with CEIFA aid frozen, aid to low and middle wealth districts decreased in real dollar terms, while Abbott parity and supplemental aid continued to grow. (See Appendix Table A-1.)

As a result of their large increases in aid, average spending in the Abbott districts increased by $3500 per pupil in real dollars between 1996-97 and 2005-06, compared to $1500 per pupil in the low wealth districts, $1300 per pupil in the middle wealth districts and $1600 per pupil in the high wealth districts. Most of the growth in spending in the non-Abbott districts resulted from increases in locally-raised revenues, driven by substantial (50%) growth in property wealth between 2000 and 2005. By 2005-06, the Abbott districts were spending about $1000 per pupil more than the high wealth districts. The poor non-Abbott and middle wealth districts were spending below the state average and considerably less than the Abbott and wealthy districts (Figure 3), while levying much higher tax rates (Figure 4).

V. Implementation and Monitoring

The New Jersey Supreme Court decisions in *Abbott IV* and *Abbott V* created a set of minimum resource standards for schools in the *Abbott* districts through parity aid and its remedial order addressing the special educational and facility needs of urban students. These decisions have been implemented through: (1) judicial and administrative specification of services and programs; (2) administrative regulation of school and school district budgets; and (3) NJDOE review of low-performing schools.

Specification of Services and Programs

In its *Abbott IV* decision, the Court ordered parity in regular education funding between the *Abbott* districts and the state's wealthy suburban communities beginning in the 1997-98 school year. Parity was set at $11,700 per pupil in 2005-06.[27] As described in Section II (pp. 8-9), the *Abbott V* and *Abbott X* decisions mandated an extensive and detailed set of inputs for Abbott districts.

Since 1998, the NJDOE has periodically issued regulations governing the implementation of the *Abbott* remedies. Through these regulations, the NJDOE recently extended the Court-mandated early literacy initiative to grades 4 through 12, and developed other requirements to improve education in Abbott middle and high schools. For example, in addition to developing a district curriculum fully aligned with the Core

[27] This figure applies only to the regular education budget. It does not include categorical funding, such as special education or bilingual education, pre-school education, or supplemental funding.

Curriculum Content Standards, Abbott districts must provide an uninterrupted language arts literacy block of 80 to 120 minutes for all students in grades 4 through 8, provide special supports for students reading below grade level, and provide both print- and technology-rich environments to support reading and writing. By September 2008, all middle and high schools must reorganize into small learning communities/small schools, create a family advocate system, provide at least three hours or three class periods weekly of common planning time for teachers within the SLCs or subject areas, increase the academic rigor of their curriculum, ensure appropriate professional development for staff, and measure and report multiple indicators of student and teacher performance.[28]

Regulation of School and School District Budgets

In addition to specifying the programs and services required in Abbott schools, NJDOE Abbott regulations provide specific guidance concerning the structure and preparation of school and school district budgets. The regulations also established a new governing relationship between schools, their districts and the state department of education. First, until 2004, it gave schools direct control over their curricula and budgets. Each school was responsible for selecting a WSR model and for developing a zero-based budget each year, in a format prescribed by the NJDOE, that included the components of the WSR model, additional programs and services identified in their needs assessments, and a program of professional development to help implement the school's WSR model. Second, the regulations gave the NJDOE the authority to review and approve each school's budget. Third, schools were expected to use their local, state and federal revenues, except where prohibited by federal law, to fund their WSR model and other identified needs.

To assist schools in the development of their budgets in the first few years of implementation, the NJDOE distributed illustrative budgets for each WSR model that contained resources for both the WSR programs and positions identified in the *Abbott V* decision (e.g., technology coordinator, security guard, counselor, social workers) for programs in grades 1-5. Although the WSR models differed considerably in their philosophy, content coverage, and pedagogical focus, the State illustrative budgets (which assumed an enrollment of 416 students in grades 1-5) generally included similar kinds and levels of resources for each program. (See Table 10.) With the exception of America's Choice, these models included the same number of teachers, regular specialists (e.g., art, music, physical education, foreign language), administrators, and student and administrative support staff. (The America's Choice illustrative budget added two more teachers and a specialist.) Schools that adopted Success for All were allocated five teacher tutors. Schools with other models were given $300,900 in "additional resources for other strategies consistent with their model," an amount equivalent to five teaching positions with benefits. The only differences in the illustrative budgets appeared in the facilitator and/or district project coordinator lines, and in non-salary instructional costs. Some models, such as Accelerated Schools and Community for Learning, budgeted less for professional development than other models. And the two

[28] Abbott regulations (2004, 2005). N.J.A.C. 6A:10A.

models that are more technology-intensive – Co-Nect and Modern Red Schoolhouse – had higher budgets for technology and other equipment (Erlichson, Goertz, & Turnbull, 1999).

In 2004, the NJDOE changed the Abbott regulations to allow for greater district involvement in both programmatic and budgetary decisions in *Abbott* schools. For example, districts, rather than schools, now draft preliminary budgets for the next school year, adjusting current year expenditures to reflect changes in programs and services identified by the school or that are necessary to conform to district policies.[29] The NJDOE continues to review and approve these budgets, and must approve district requests for any increase in supplemental funding.

Review of Low-performing Schools

The NJDOE has developed a school improvement review and planning process for low-performing schools, including non-Abbott schools in Corrective Action under NCLB. Modeled on a program to help low-performing schools in Kentucky, the Collaborative Assessment and Planning for Achievement (CAPA) process is designed to evaluate the quality of instruction and leadership in each school, effectiveness of school district and NJDOE support for the school, and adequacy of resources to meet documented instructional needs. The CAPA team, which is comprised of a highly skilled teacher and principal, a parent, and a literacy and math specialist, develops a written improvement agreement for the school which provides the basis for modifying the school's three-year operational plan and annual budget. The CAPA process, which is led by the NJDOE's Title I office, has conducted at least 100 of these reviews, but there has been no evaluation of their findings or effectiveness.

Monitoring of Abbott school programs and budgets

Other than their annual review of school budgets, and the CAPA review process (which has been limited to a small number of schools), the NJDOE has done little to monitor the use of education dollars or the substance and quality of educational programs although the NJ Supreme Court ordered to state to monitor, supervise and audit the use of additional parity funds in its *Abbott IV* decision. This lack of state oversight of Abbott school spending has been the subject of ongoing negotiation and litigation between the plaintiffs and the State. In its most recent decision (May 2006), the Court once again ordered the NJDOE to undertake fiscal audits and programmatic evaluations of all Abbott districts during the forthcoming school year (2006-07). In addition, although the NJDOE has let four RFPs over the last several years for an evaluation of the impact of Abbott, it has not funded any of them.

VI. Is It Adequate? .

[29] Abbott regulations (November 2004). N.J.A.C. 6A:10A

Has 30 years of school finance litigation led to an adequate education in New Jersey? In the absence of any formal study to define and cost out an adequate education in the state, one cannot answer this question with any certainty.[30] We, like the New Jersey Supreme Court, are left without a measuring stick to determine the level of an adequate education. I therefore turned to two proxy measures of an adequate education: (1) the CEIFA foundation amount; and (2) for the Abbott districts, the average spending in the state's highest wealth districts (the parity level). This section ends with a brief discussion of changes in student achievement in the Abbott districts.

CEIFA Foundation Amount

The CEIFA foundation amount is supposed to represent the average cost of providing a set of inputs deemed sufficient for a regular education student to meet the state's academic content standards. This amount has not been updated or increased since 2001-02. For purposes of this analysis, I first adjusted the CEIFA foundation amounts by inflation to update the figures to 2005-06. I then weighted the three grade level CEIFA amounts by the relative proportions of elementary, middle and secondary school students enrolled in 2005-06 to come up with a single foundation level: $9,081. Since the foundation level is designed to support only the regular education budget, I then compared this figure to the spending analyses discussed in Section V of this paper. Looking at both Tables 6 and 7, we find that, on average, districts in all wealth groups, including the poor non-Abbott districts, spent above this foundation level in 2005-06.

There are three major limitations to the use of this updated CEIFA foundation level as a measure of adequacy, however. First, there has been no research linking the level and mix of inputs in the CEIFA model to the Core Curriculum Standards or to student performance on the CCS as measured by the state assessment. Second, the state has not updated the cost of the CEIFA model to reflect changes in average salaries and related costs. Third, while districts in all wealth groups are spending above the foundation level, as discussed in Section V, they are supporting this level of expenditure with increased local revenues. This had led to a tax revolt in the state, and the convening of a special session of the legislature in August 2006 to address issues of spending and high property taxes.

Parity Aid

The NJ Supreme Court has established two measures of adequacy for the Abbott districts: (1) the parity level, which was $11,700 in 2005-06; and (2) a long list of required programs and services. As shown in Tables 7 and 7-A and Figure 3, the Abbott districts now spend, on average, more than the parity level of a Court-driven definition of

[30] The state funded a professional judgment adequacy study in 2003, with updates in 2004 and 2005. The NJDOE has refused to release the study, arguing that the information is "deliberative" in nature. The Education Law Center, attorneys for the Abbott districts, sued the state on July 17, 2006 for release of the document under the state's Open Public Records Act.

adequacy for the urban districts, due to their receipt of supplemental Abbott Aid. How have the Abbott districts used these funds? Are they providing the kinds of inputs that the Court mandated?

In the late 1990s, both the Abbott schools and the NJDOE relied heavily on the CSR model budgets developed by the state to preparing, review and approve school budgets. As discussed on page 21, these "illustrative" budgets included resources for both the WSR programs and positions identified in the *Abbott V* decision (e.g., technology coordinator, security guard, counselor, social workers). In a study of FY2000-01 school budgets in four A*bbott* districts, Erlichson and Goertz (2001, 2002) found the use of these model or "illustrative" budgets drove the use of resources in the schools, resulting in similar resource allocation patterns across CSR models and districts. Elementary schools budgeted the positions included in their illustrative budgets and, in many cases, added vice-principals, teacher tutors, basic skills teachers, attendance staff, additional security and instructional aides—what the authors characterized as "Illustrative Budget Plus." These data confirmed the observation of one district administrator that schools raised themselves to the level of the illustrative budget where it represented an increase in their current spending or resources, and then added vice principals, additional equipment and additional instructional support staff that were not in their model(s).

Holding school size constant, schools in most of the study districts budgeted, on average, more staff than their models required (Table 10). Illustrative budgets for three of the elementary school models--Accelerated Schools, Community for Learning, and Comer--called for a student/staff ratio of 11.5:1 in grades 1 to 5. Budgeted ratios, however, were generally in the range of 9.8:1 to 10.7:1. (The illustrative budget for America's Choice was more generous, calling for a student/staff ratio of 10.4:1. Schools in District 3 that use this model budgeted at about that level.) Several factors explained the higher levels of staffing. First, many schools budgeted for slightly smaller class sizes--between 20 and 22.6 students per teacher--than those called for in most of the models-- 23.1 students per teacher. Second, schools using models other than SFA had $300,900 "in lieu of teacher tutors" they could use to fund additional positions. Finally, it did not appear that smaller schools--those with fewer than the 416 students in the model school--had their staff allocations reduced proportionately. The staffing structure of the models built in fixed costs by requiring all schools to have a principal, social worker, counselor, etc. A school with 300 students--common in District 5--was not expected to employ three-quarters of a facilitator, nurse, counselor, and so forth.

While student/staff ratios were consistent across districts and models, per pupil costs were not. Most of the elementary school models budgeted about $6400 per pupil; SFA, which covered pre-K to 5 that year, cost about $5700 per pupil. Actual school budgets ranged from $5500 per pupil to over $7600 per pupil for the non-SFA models and from $5100 per pupil to $7200 per pupil for SFA. Average costs varied more across districts than across models. For example, average school budgets in District 2 ranged from $5100 to $6100 per pupil, while those in District 5 run from $7200 to $7600 per pupil. One reason for these differences was the variation in average salaries across communities. A second factor was the interaction of average school size and the fixed

cost of the non-instructional staff contained in the illustrative budgets. Districts with small schools (e.g., elementary schools in Districts 4 and 5) had higher per pupil costs for the mandated, non-instructional positions. Districts with larger schools (such as elementary schools in District 2), conversely, had lower per pupil costs for these staff.

The structure of the 2000-2001 budgets did not allow the researchers to track the reallocation of positions within schools. The appropriate data were available, however, for the 1999-2000 budgets. Analysis of those data showed that most of the study schools filled an average of one-third of their new WSR positions through the reallocation of staff. Title I teachers often became teacher tutors or model facilitators. Other supplemental instructional staff was assigned to classrooms to reduce class size and/or meet growing enrollments, or was reassigned into the roles of facilitators and technology coordinators (Erlichson, Goertz, & Turnbull, 1999).

When districts totaled the state-approved school budgets, they often exceeded anticipated school-level expenditures. In response, districts cut their central office budgets, generally in the areas of technology and facilities. Some of the district staff hoped that the facilities reductions would be offset by new dollars from the court-ordered state-funded facilities program. Unable to reallocate their remaining central office funds, 25 of the 30 *Abbott* districts requested a total of $1.234 billion in supplemental funds (including early childhood programs) in 2001. The NJDOE granted $368 million of this request. It argued that schools and districts had over-budgeted, could reduce or reallocate expenditures, and should apply federal aid and surplus funds to their budgets.

There has been no comparable analysis of Abbott school budgets since 2001. As part of another study, Goertz, Gross and Weiss (2005) examined the budgets of five elementary schools in one Abbott district in 2004-05 (that happens to be District 5 from the Erlichson and Goertz study.) As with Erlichson and Goertz (2001, 2002), Goertz, Gross and Weiss (2005) found relatively similar allocation patterns across the five schools regardless of CSR model (Table 11). The schools devoted between 55% and 60% of their regular education budgets to core academic teachers and specialists. Each school had at least 5 specialists who provided regular classroom teachers with preparation and planning time. Because they operated in two buildings, Pine and Redwood each had 8 specialists. While Pine and Redwood shared some specialists across their two buildings (generally art, music and library), they assigned each building its own physical education and computer teachers. Although SFA is the only model to require the use of teacher tutors, all schools employed them; most had one tutor.[31] Class sizes generally ranged from 20 to 22 students in grades 1-5. In line with the *Abbott* mandates, all of the schools had a guidance counselor, a nurse, a social worker (or contracted out for these services) and a parent liaison.[32] A few of the schools had some of the time of a district attendance

[31] The Education Law Center (2006) reports that 68% of Abbott elementary schools did employ a teacher tutor in 2004-05.

[32] The Education Law Center (2006) reports that 31% of Abbott schools did not have a parent liaison in 2004-05.

officer (generally one day a week), and Maple had a full-time school psychologist. Pine and Redwood placed a school nurse in each of their buildings, and Redwood, the largest school in the sample, placed an additional guidance counselor and parent liaison in its annex.

The last row of Table 11 shows the average cost per pupil for each school. Although the patterns of resource allocation were generally similar across the five schools, there was more variation in per pupil expenditure even when using average salary figures. Spending ranges from a low of $7,992 per pupil in Walnut to a high of $9,630 in Maple—a difference of 20%. About half of this difference was due to differences in average class size: 24.5 versus 19.1. Another factor was differences in spending on professional development. Maple had two SFA facilitators and a Reading First coach, while Walnut (and two of the other schools) had only one facilitator. In addition, payments to WSR providers differed across the schools.

The overall pupil/staff ratio ranged from 9 to 11 across the five schools, again similar to the pupil/staff ratio in schools four years earlier. Adjusted for inflation, the per pupil spending in 2005-06 was comparable in two schools and slightly higher in the other three than spending of the District 5 schools in the earlier Erlichson and Goertz study.

The issue of whether parity aid is sufficient to support the Court-mandated programs and services and supplemental programs remains a significant policy issue and the subject of negotiation and litigation between the state and the Abbott districts. The NJDOE is responsible for approving requests for supplemental funding (called Additional Abbott Aid), if parity aid is insufficient. Additional Abbott Aid is then subject to appropriation by the legislature. As mentioned above, the NJDOE granted $368 million in supplemental funding in 2001 after looking for funds in the districts' central office budgets. In spite of large increases in Abbott parity aid (from $246 million in 1997-98 to $925 million in 2005-06), supplemental funding grew from $178 million in 2000-01 to over $600 million in 2005-06. Supplemental funding was frozen in FY 2007 due to the state's budget crisis, and, under Court order, the NJDOE has initiated audits of all Abbott district budgets to determine if funds are being spent efficiently and if additional resources are needed.

Student Performance

It is difficult to examine the impact of Abbott on student performance in New Jersey over time as the state, like many others, has changed its assessments. Also, any evaluation is limited to cohort analyses. New Jersey did not implement grade-by-grade testing until 2005-06, and does not have a student-level data base. However, one can use state assessment and NAEP data to ascertain some trends.

State assessments.[33] New Jersey has used the same 4th grade mathematics, and 8th grade language arts and mathematics tests since 1998-99, the same 4th grade language arts

[33] This section is drawn from Education Law Center (2006).

literacy test since 2000-01, and the same 11th grade tests since 2001-02. Between 2001 and 2005, the percentage of general education students who scored proficient on the 4th grade language arts literacy test rose from 63 to 77 percent (Table 12). Performance by Abbott students on the 4th grade mathematics tests increased from 36% to 72% proficient between 1999 and 2005. The picture is bleaker for 8th grade Abbott students. Proficiency levels in 8th grade language arts were stagnant in the Abbott districts (at 61% proficient), and grew only six percentage points (to 42% proficient) in mathematics. High school students in the Abbott districts showed small increases in proficiency on the language arts proficiency test (seven percentage points) and more growth in mathematics (13 percentage points) between 2002 and 2005. As a result, the performance gap between students in Abbott and non-Abbott districts did close in all tested grades and subject areas, particularly in 4th grade. Less than 20 percentage points separates the two groups in 4th grade language arts and mathematics and in 11th grade language arts. Large gaps remain in 8th grade and in 11th grade mathematics, however.

NAEP. New Jersey participated in NAEP through 1996, but not again until 2003 when required under NCLB. Table 3 presents the most recent years of test scores for 4th and 8th grade reading and mathematics. NAEP reports scores by school location, and I have used the Central City category as a proxy for the Abbott districts in New Jersey, and the Urban Fringe as a proxy for the suburbs. The NAEP results confirm the changes we saw using state assessment data. NAEP scores in 4th grade reading and mathematics rose 19 and 20 points, respectively between the mid-1990s and 2005, and at a faster rate than either the Urban Fringe or state as a whole. Eighth grade reading scores for the urban districts were stagnant and there was only small growth in 8th grade mathematics. However, the rate of growth was similar to, or greater than, the comparison groups.

Conclusion

Thirty years of school finance litigation has established an adequacy standard for poor urban school districts in New Jersey through a minimum funding level and a minimum set of standards linked to education spending and programs in the state's wealthiest communities. The Abbott districts currently spend more, on average, than the wealthy districts in the state. These new dollars have enabled the Abbott districts to provide their students with educational programs that, on many dimensions, mirror those of their suburban counterparts--smaller class sizes; art, music and technology specialists; student support services; and modern facilities. Test scores in the Abbott schools, as measured by both state and national assessments, have risen, particularly in the 4th grade, narrowing the performance gap between poor urban and other students in the state. The differential growth in test scores between elementary and secondary schools may reflect the initial focus of the state and local districts on elementary schools through focused academic programs (including WSR) and more prescriptive use of resources.

The state has not established a clear adequacy standard for the rest of New Jersey's school districts, however. The state has established a set of inputs that it considers adequate for bringing all students to proficiency, but this model has not been validated against either the state's academic standards or student test scores. The model

also has been funded in fits and starts, with the result that poor non-Abbott and middle wealth districts are relying more heavily on local revenues to support education spending.

Table 1

Demographic and Economic Characteristics of New Jersey

	New Jersey	US
Population, 2005 estimate	8,717,925	
Persons per square mile, 2000	1134.4	79.6
% White persons, Non-Hispanic origin, 2004	63.8%	67.4%
% African-American persons, 2004	14.5%	12.8%
% Hispanic or Latino origin, 2004	14.9%	14.1%
% Asian persons, 2004	7.0%	4.2%
% Foreign born persons, 2000	17.5%	11.1%
Language other than English spoken at home, % age 5+, 2000	25.5%	17.9%
% Bachelor's degree or higher, 2000	29.8%	24.4%
Per capita money income, 1999	$27,006	$21,587
Median household income, 2003	$56,356	$43,318
% Persons below poverty, 2003	8.9%	12.5%
Median value of owner-occupied housing, 2000	$170,000	$119,600

Source: U. S. Census Bureau: State and County QuickFacts.
Http://quickfacts.census.gov/qfd/34000.html. Accessed on 6/19/06.

Table 2

Student Characteristics in New Jersey School District, 2005-06

	State	*Abbott* districts	Non-*Abbott* districts	*Abbott* districts as % of state
Student enrollment	1,394,779	280,900	1,113,878	20.1%
% White students	56.5%	12.3%	67.7%	4.4%
% African-American students	17.6%	40.7%	11.8%	46.5%
% Hispanic students	18.1%	44.0%	11.7%	48.8%
% Asian students	7.5%	2.8%	8.7%	7.5%
% Free and reduced school lunch (FRL)	26.8%	65.6%	17.0%	49.3%
% LEP students (?)				
PP Property wealth	$687,815	$270,450	$768,030	8.4%

Sources: Data on enrollments, student race/ethnicity and FRL: New Jersey State Department of Education, 2005-06 Enrollment: Total Enrollment by Race and Sex for Every School in New Jersey. File: stat_enr.csv. Http://www.state.nj.us/njded/data/enr/enr06/stat_cod.htm. Accessed 6/19/06.

Data on property wealth: NJDOE, State aid file, 2005-06.

Table 3

Average per Pupil Property Wealth, New Jersey School Districts, 2005-06, grouped by Per Pupil Property Wealth[34]

	Number of districts	Enrollment	Per Pupil Property Wealth, 2005
Abbott districts	30	289,184	$270,450
Low Wealth	79	113,775	$306,356
Middle Wealth	225	561,513	$603,198
High Wealth	217	392,354	$1,227,150
State Average	551	1,356,826	$687,815

Source: NJDOE, State aid file, 2005-06.

[34] See p. X for explanation of wealth groupings.

Table 4

State Aid for Education in New Jersey, 2005-06 (in millions)

		2005-06	Percent of Total State Aid	Percent of Total State Aid (without Retirement)
Total Equalization Aid		3,515.3	37.5%	44.8%
Core Curriculum Standards Aid	3,080.3			
(CCS)				
Supplemental CCS	251.8			
Stabilization Aid /Other Adjustments	183.2			
Abbott Aid		1,725.0	18.4%	22.0%
Education Opportunity Aid	1,520.8			
Preschool Expansion Aid	204.2			
Categorical Aid		2,230.8	23.8%	28.4%
Special Education	948.4		.	
Early Childhood	334.6			
DEPA	215.1			
Bilingual	65.6			
Non-Public School	102.7			
Transportation	307.2			
Other	257.2			
School Construction		378.9	4.0%	4.8%
Teacher Retirement		1,522.6	16.3%	
Pension Contribution/ Debt Service	181.4			
Post-retirement Medical	685.4			
Social Security	655.8			
Total Aid		9,372.6		

Source: State of New Jersey Budget, FY2006 and FY2007

Table 5

State Aid for Education in New Jersey (in millions), 1975-76 through 2005-06

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Total Equalization Aid	430.8	679.9	1,217.0	1,809.8	2,632.1	2,729.1	3,283.4	3,515.3
Abbott Aid[35]	0.0	0.0	0.0	0.0	0.0	0.0	548.6	1,725.0
Categorical Aid	136.0	254.3	537.9	837.1	1,371,0	1,374.3	1925.3	2,230.8
School Construction	32.2	68.6	102.2	87.2	69.9	80.6	226.9	378.9
Teacher Retirement	196.4	242.7	535.8	803.2	510.2	667.4	785.2	1,522.6
Total Aid	798.4	1,245.5	2,392.9	3,537.3	4,574.2	4,851.4	6,769.5	9,372.6

Table 5-A

State Aid for Education in New Jersey (in millions), 1975-76 through 2005-06 (CPI Adjusted)

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Total Equalization Aid	1576.7	2284.5	2275.8	2841.4	3527.0	3384.1	3710.2	3,515.3
Abbott Aid[36]	0	0	0	0	0	0.0	619.9	1,725.0
Categorical Aid	497.8	854.4	1005.9	1314.2	1837.1	1704.1	2175.6	2,230.8
School Construction	117.9	230.5	191.1	136.9	93.7	99.9	256.4	378.9
Teacher Retirement	718.8	815.5	1001.9	1261.0	683.7	827.6	887.3	1,522.6
Total Aid	2922.1	4184.9	4474.7	5553.6	6129.4	6015.7	7649.5	9,372.6

Source: State of New Jersey Budget, FY76 through FY06

[35] Includes Abbott Parity Aid, Abbott Additional Aid and Abbott Pre-school Expansion Aid
[36] Includes Abbott Parity Aid, Abbott Additional Aid and Abbott Pre-school Expansion Aid

Figure 1
Regular Education Budget Per Pupil (CPI Adjusted)
Across Wealth Septiles 1,3,5, and 7
1975-76 to 2005-2006

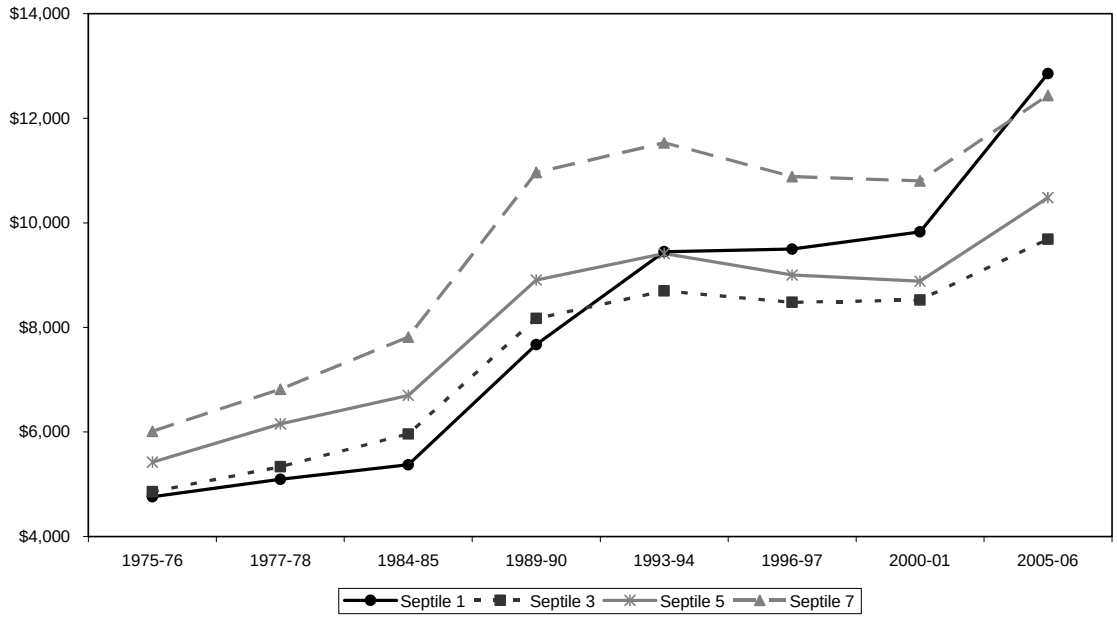

Figure 2
Tax Rates Across Wealth Septiles 1,3,5, and 7
1975-76 to 2005-2006

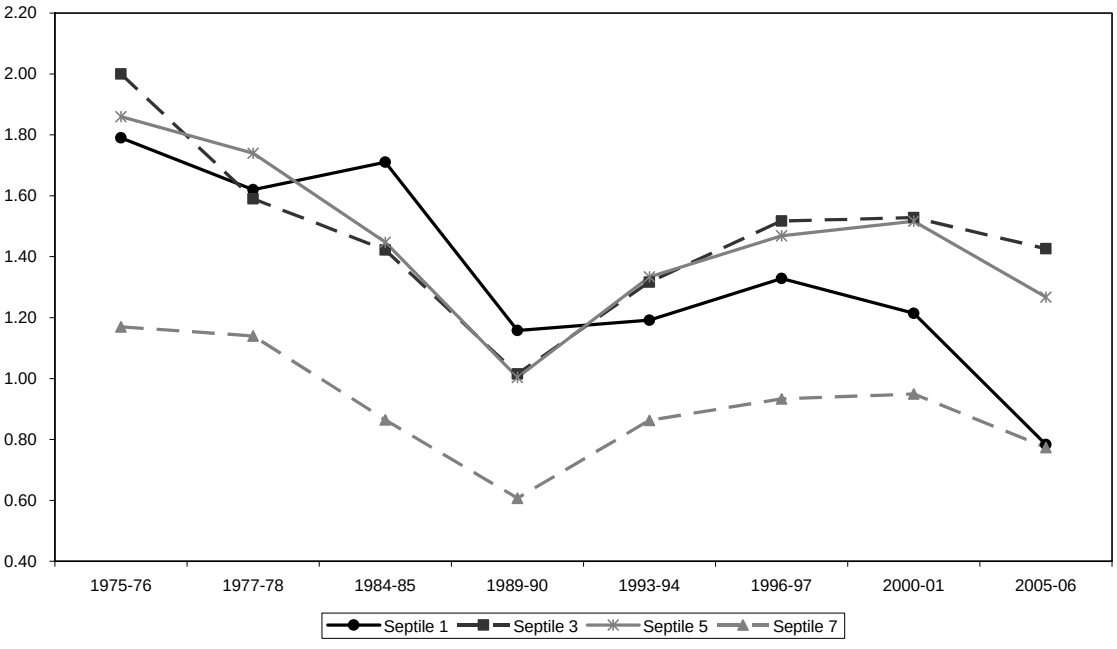

FIGURE 3

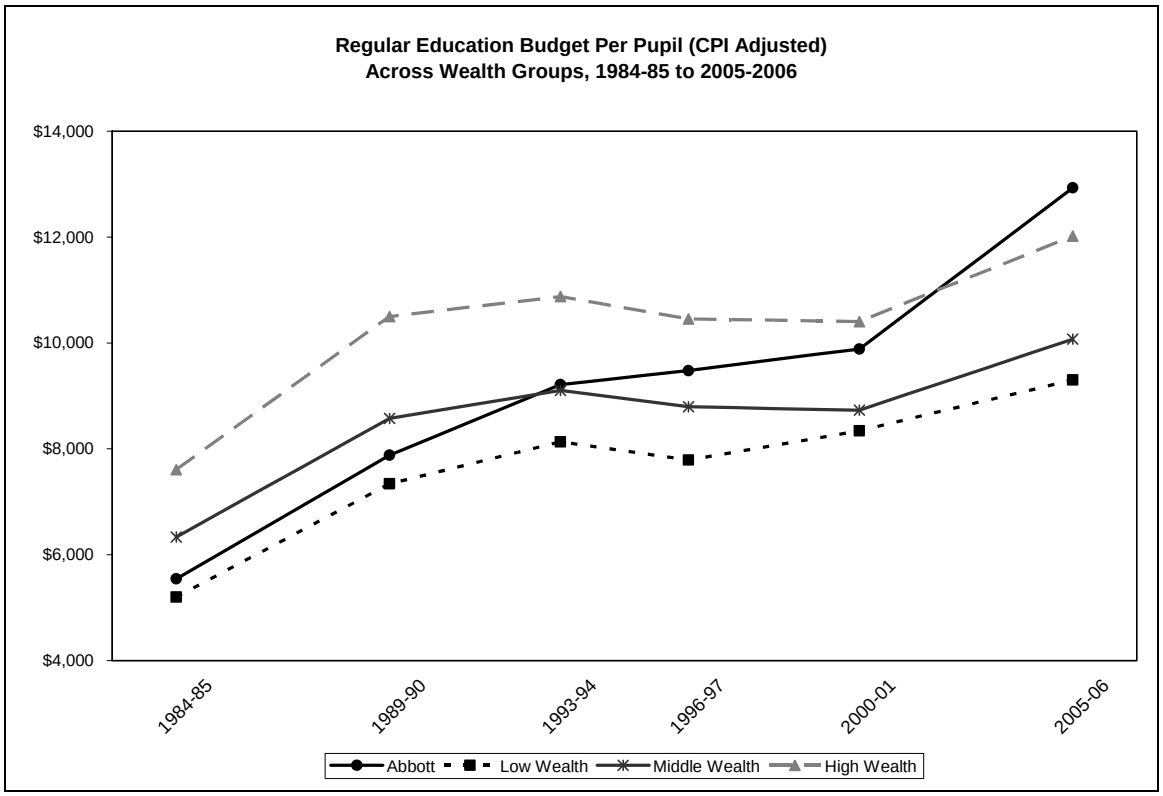

FIGURE 4

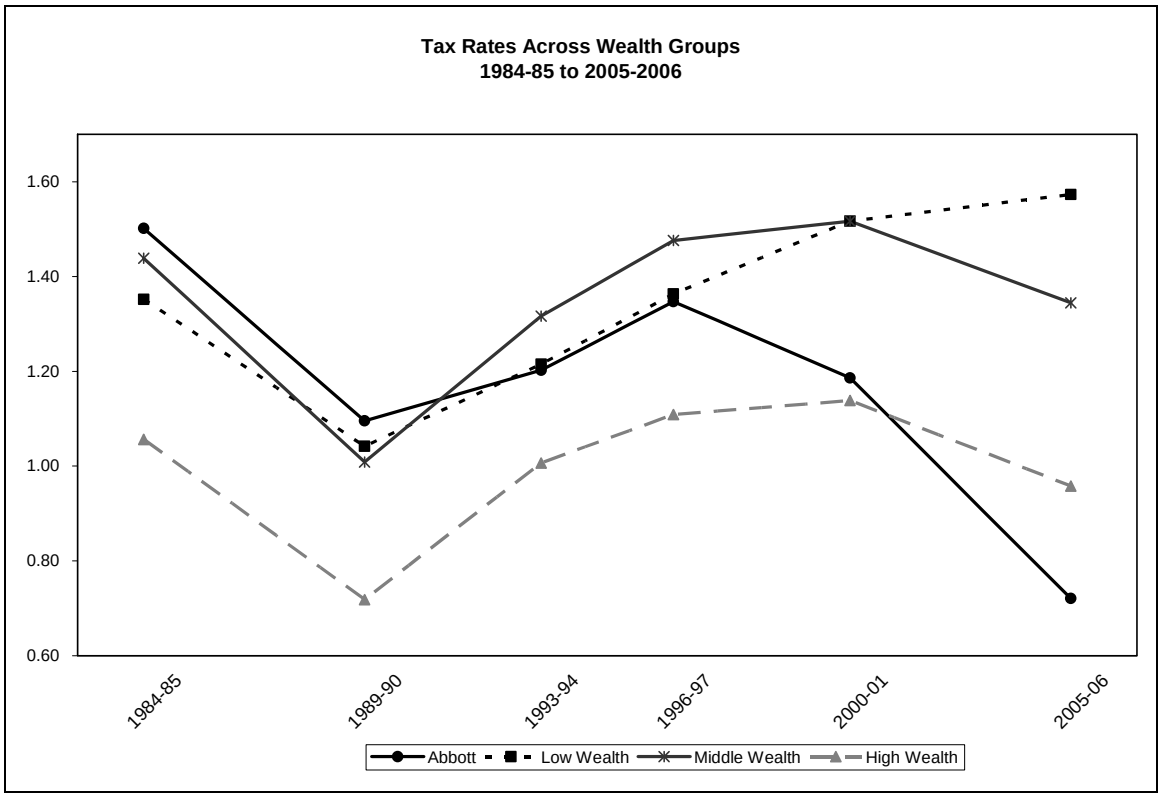

Table 6

Regular Education Budget per Pupil, Districts Grouped by Property Wealth per Pupil, 1975-76 through 2005-06

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Septile 1	$1301	$1516	$2,859	$4,872	$6,991	$7,630	$8,912	$12,855
Septile 2	1304	1502	2,923	4,761	6,215	6,834	8,240	10,954
Septile 3	1328	1588	3,172	5,188	6,435	6,812	7,731	9,687
Septile 4	1383	1615	3,339	5,450	6,873	7,224	8,050	10,251
Septile 5	1482	1832	3,565	5,655	6,965	7,232	8,056	10,482
Septile 6	1576	1885	3,934	6,358	7,591	8,083	9,078	11,644
Septile 7	1643	2029	4,158	6,964	8,531	8,746	9,796	12,437
State Average	1411	1688	3,423	5,608	7,092	7,513	8,558	11,178

Table 6-A

Regular Education Budget per Pupil, Districts Grouped by Property Wealth per Pupil, 1975-76 through 2005-06, CPI Adjusted

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Septile 1	$4763	$5095	$5374	$7673	$9449	$9498	$9828	$12855
Septile 2	4772	5046	5495	7498	8400	8506	9087	10954
Septile 3	4860	5337	5962	8171	8697	8480	8526	9687
Septile 4	5062	5428	6277	8584	9289	8992	8877	10251
Septile 5	5426	6156	6701	8907	9413	9003	8883	10482
Septile 6	5770	6333	7394	10013	10260	10061	10011	11644
Septile 7	6012	6818	7815	10968	11530	10886	10803	12437
State Average	5165	5870	6434	8832	9585	9352	9437	11178

Sources: For 1976-77 and 1977-78, Goertz (1983). For other years, author's analysis of state aid databases.

Table 7

Regular Education Budget per Pupil, Districts Grouped by Property Wealth per Pupil, 1984-85 through 2005-06
Abbott Districts Separated

	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Abbott 30	2948	5003	6816	7614	8964	12928
Low Wealth	2766	4659	6016	6255	7563	9300
Middle Wealth	3370	5444	6734	7064	7916	10072
High Wealth	4046	6666	8046	8397	9434	12018
State Average	3423	5608	7092	7513	8558	11178

Table 7-A

Regular Education Budget per Pupil, Districts Grouped by Property Wealth per Pupil, 1984-85 through 2005-06
Abbott Districts Separated, CPI Adjusted

	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Abbott 30	5542	7879	9212	9478	9886	12928
Low Wealth	5200	7338	8130	7786	8340	9300
Middle Wealth	6334	8575	9102	8793	8730	10072
High Wealth	7604	10499	10875	10452	10404	12018
State Average	6434	8832	9585	9352	9437	11178

Source: Author's analysis of state aid databases.

Table 8

School Tax Rates, Districts Grouped by Property Wealth per Pupil, 1975-76 through 2005-06

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Septile 1	1.79	1.62	1.71	1.16	1.19	1.33	1.21	0.78
Septile 2	2.12	1.62	1.37	1.07	1.16	1.32	1.34	1.14
Septile 3	2.00	1.59	1.42	1.01	1.32	1.52	1.53	1.43
Septile 4	1.99	1.59	1.43	1.02	1.31	1.47	1.51	1.34
Septile 5	1.86	1.74	1.45	1.00	1.33	1.47	1.52	1.27
Septile 6	1.74	1.68	1.38	0.90	1.24	1.40	1.46	1.26
Septile 7	1.17	1.14	0.86	0.61	.086	0.93	0.95	0.77
State Average Tax Rate	1.69	1.50	1.24	0.86	1.14	1.27	1.29	1.10
State Aver Prop Val/Pupil			189,821	458,672	426,880	414,776	449,242	687,815

Table 8-A

.School Tax Rates, Districts Grouped by Property Wealth per Pupil, 1984-75 through 2005-06
Abbott Districts Separated

.	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Abbott 30	1.50	1.10	1.20	1.35	1.19	0.72
Low Wealth	1.35	1.04	1.21	1.36	1.52	1.57
Middle Wealth	1.44	1.01	1.32	1.48	1.52	1.34
High Wealth	1.06	0.72	1.01	1.11	1.14	0.96
State Average	1.24	0.86	1.14	1.27	1.29	1.10
State Aver Prop Val/Pupil	189,821	458,672	426,880	414,776	449,242	687,815

Sources: For 1976-77 and 1977-78, Goertz (1983). For other years, author's analysis of state aid databases.

Table 9

Regular Education Budget per $1.00 Tax Rate, Districts Grouped by Property Wealth per Pupil, 1975-76 through 2005-06, CPI Adjusted

	1975-76	1977-78	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Septile 1	2261	3145	3142	6629	7927	7149	8095	16406
Septile 2	2251	3115	4002	7033	7218	6454	6782	9594
Septile 3	2430	3357	4191	8051	6607	5589	5579	6792
Septile 4	2544	3414	4393	8399	7109	6127	5893	7649
Septile 5	2917	3538	4630	8876	7058	6129	5858	8268
Septile 6	3316	3770	5341	11077	8251	7207	6835	9222
Septile 7	5139	5981	9040	18053	13360	11662	11378	16079
State Average	3056	3780	5199	10242	8415	7362	7302	10149

Table 9-A

. Regular Education Budget per $1.00 Tax Rate, Districts Grouped by Property Wealth per Pupil, 1984-85 through 2005-06, CPI Adjusted, Abbott Districts Separated

.	1984-85	1989-90	1993-94	1996-97	2000-01	2005-06
Abbott 30	3690	7193	7663	7035	8333	17935
Low Wealth	3847	7044	6692	5712	5498	5912
Middle Wealth	4403	8499	6914	5956	5755	7491
High Wealth	7198	14615	10804	9427	9138	12545
State Average	5199	10242	8415	7362	7302	10149

Source: Calculated by author.

Table 10
Comparison of WSR Model and Average School Budgets,
Elementary Schools in Four Abbott Districts: 2000-2001

Model	**Accelerated Schools**			**America's Choice**		**Community for Learning**		
	Model Budget	**Average District 5**	**Average District 2**	**Model Budget**	**Average District 3**	**Model Budget**	**Average District 2**	**Average District 5**
Grade Span	**1 to 5**	**1 to 5**	**1 to 5**	**1 to 5**	**1 to 5**	**1 to 5**	**1 to 5**	**1 to 5**
Enrollment	**416**	**301**	**589**	**416**	**421**	**416**	**587**	**347**
	Number	Number	Number	Number	Number	Number	Number	Number
Teachers: 1 to 5	18.00	14.33	25.00	20.00	18.60	18.00	25.71	16.75
Regular Specialists	4.00	3.53	8.50	5.00	3.88	4.00	9.63	3.59
Principal	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Facilitator	1.00	1.00	1.00	2.00	2.00	1.00	1.14	1.50
Social Worker	1.00	0.33	1.00	1.00	0.80	1.00	0.93	1.00
Counselor	1.00	1.00	1.00	1.00	0.90	1.00	1.43	1.00
Nurse	1.00	1.00	1.00	1.00	1.00	1.00	1.29	1.00
Family Liaison	1.00	1.00	1.00	1.00	1.20	1.00	1.14	0.88
Lib/Media/Tech Coor	2.00	1.50	2.00	2.00	2.00	2.00	2.31	1.88
Security	1.00	1.00	2.00	1.00	0.25	1.00	2.57	1.00
Clerical	2.00	2.00	3.00	2.00	2.00	2.00	2.57	1.88
Support Aides	3.00	0.00	0.00	3.00	0.00	3.00	3.00	0.25
Dist/Project Coach	0.25	0.00	0.00	0.00	1.20	0.25	0.00	0.00
Teacher Tutors	*0.00*	*0.86*	*0.00*	*0.00*	*0.00*	*0.00*	*2.71*	*1.92*
PreK/K Aides								
*Vice Principal**	*0.00*	*0.00*	*0.00*	*0.00*	*0.60*	*0.00*	*1.29*	*0.00*
*Basic Skills/IST **	*0.00*	*0.00*	*0.00*	*0.00*	*2.60*	*0.00*	*0.71*	*0.00*
*Instructional Aides**	*0.00*	*0.33*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.50*
*Non-instruct Aides**	*0.00*	*0.00*	*0.00*	*0.00*	*0.60*	*0.00*	*0.11*	*0.00*
*Attendance**	*0.00*	*0.17*	*0.00*	*0.00*	*0.00*	*0.00*	*0.43*	*0.35*
*In-School Suspension**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.29*	*0.00*
*SAC Counselor**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.29*	*0.00*
*Full-time Substitutes**	*0.00*	*0.00*	*0.00*	*0.00*	*1.00*	*0.00*	*0.00*	*0.00*
*Other**	*0.00*	*0.08*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*1.00*
Total Staff	**36.25**	**29.13**	**46.50**	**40.00**	**39.63**	**36.25**	**58.55**	**35.50**
Pupil-staff ratio	**11.48**	**10.33**	**12.67**	**10.40**	**10.62**	**11.48**	**10.03**	**9.77**
Salary and Benefits	2025769	1836788	2555278	2240116	2469766	2036469	2987723	2139650
Non-Salary Costs**	605600	451162	672361	684745	536671	601100	573253	413573
Total Costs	**2631369**	**2287950**	**3227639**	**2924861**	**3006437**	**2637569**	**3560976**	**2553223**
Cost per pupil	**6,325**	**7,601**	**5,480**	**7,031**	**7,141**	**6,340**	**6,066**	**7,358**

* Positions that are outside the Illustrative Budget.

** Includes $300,600 in lieu of teacher tutors, non-salary instructional costs (e.g., curricular materials and consultants, technology and other equipment, extracurricular activities, and professional development), and non-salary administrative costs.

Table 10 (cont'd)

Model	Comer			Success for All			
	Model Budget	Average District 2	Average District 5	Model Budget	Average District 2	Average District 4	Average District 5
Grade Span	**1 to 5**	**1 to 5**	**1 to 5**	**PreK to 5**	**PreK to 5**	**PreK to 5**	**PreK to 5**
Enrollment	**416**	**461**	**309**	**584**	**764**	**477**	**482**
	Number	Number	Number	Number	Number	Number	Number
Teachers: 1 to 5	18.00	23.00	13.50	24.00	34.00	23.50	21.34
Regular Specialists	4.00	5.05	5.09	4.00	8.83	3.79	3.79
Principal	1.00	1.00	1.00	1.00	1.00	11.13***	1.00
Facilitator	1.00	1.00	1.00	2.00	1.75		1.70
Social Worker	1.00	0.83	1.00	1.00	0.75		0.60
Counselor	1.00	1.25	1.00	1.00	1.50		1.20
Nurse	1.00	1.25	1.00	1.00	1.50		1.00
Family Liaison	1.00	1.00	1.00	1.00	1.00		1.00
Lib/Media/Tech Coor	2.00	1.95	1.50	2.00	2.25		1.90
Security	1.00	2.00	1.00	1.00	2.00		1.20
Clerical	2.00	2.25	2.00	2.00	3.00	3.25	1.90
Support Aides	3.00	0.50	0.10	3.00	3.00	2.25	0.10
Dist/Project Coach	0.25	0.25	0.00	0.00	0.00	0.00	0.00
Teacher Tutors	*0.00*	*0.00*	*0.00*	5.00	7.25	6.88	4.64
PreK/K Aides				7.00	5.75	8.75	4.80
*Vice Principal**	*0.00*	*0.25*	*0.00*	*0.00*	*0.75*	*0.00*	*0.00*
*Basic Skills/IST**	*0.00*	*0.75*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
*Instructional Aides**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
*Non-instruct Aides**	*0.00*	*0.50*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
*Attendance**	*0.00*	*0.00*	*0.50*	*0.00*	*0.25*	*0.00*	*0.42*
*In-School Suspension**	*0.00*	*0.25*	*0.00*	*0.00*	*0.25*	*0.00*	*0.00*
*SAC Counselor**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
*Full-time Substitutes**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
*Other**	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.40*
Total Staff	**36.25**	**43.08**	**29.69**	**55.00**	**74.83**	**59.55**	**46.99**
Pupil-staff ratio	**11.48**	**10.70**	**10.41**	**10.62**	**10.21**	**8.01**	**10.26**
Salary and Benefits	2025769	2193190	1845956	2847108	3430593	2562509	2869310
Non-Salary Costs**	640800	483423	409328	478100	454828	579474	616445
Total Costs	**2666569**	**2676613**	**2255284**	**3325208**	**3885421**	**3141983**	**3485755**
Cost per pupil	**6,410**	**5,806**	**7,299**	**5,694**	**5,086**	**6,587**	**7,232**

* Positions that are outside the Illustrative Budget.

** Includes $300,600 in lieu of teacher tutors, non-salary instructional costs (e.g., curricular materials and consultants, technology and other equipment, extracurricular activities, and professional development), and non-salary administrative costs.

*** Sum of non-instructional staff (e.g., principal…security)

Source: Erlichson & Goertz, 2002, Table 2.

Table 11: Expenditure Structure (Regular Education Spending) for Five Elementary Schools in One Abbott District, 2004-2005

	Maple (n=394) SFA			Pine (n=453) SFA *,**			Walnut (n=367) ASP			Willow (n=401) ASP *			Redwood (n=601) Comer *,**		
Expenditure Element	**FTE**	**Cost Per Pupil**	**Pupil/ Staff Ratio**	**FTE**	**Cost Per Pupil**	**Pupil/ Staff Ratio**	**FTE**	**Cost Per Pupil**	**Pupil/ Staff Ratio**	**FTE**	**Cost Per Pupil**	**Pupil/ Staff Ratio**	**FTE**	**Cost Per Pupil**	**Pupil/ Staff Ratio**
Instructional															
1. Core Academic Teachers	20.0	4,251	19.1	22.0	4,067	20.6	15.0	3,423	24.5	20.0	4,177	20.0	27.0	3,762	22.3
2. Specialists & Elective Teachers	5.0	1,069	78.8	8.0	1,482	56.6	5.0	1,143	73.4	5.0	1,046	80.2	8.0	1,116	75.1
3. Extra Help															
Tutors	0.5	106		1.0	185		1.0	228		1.0	209		2.0	279	
Extended Day	0.0	37		0.0	40		0.0	71		0.0	68		0.0	32	
4. Professional Development	3.0	987		2.0	785		1.0	579		1.0	483		1.0	313	
5. Other Non-Classroom Instructional Staff	7.0	539	56.3	5.0	359	90.6	4.0	354	91.2	8.0	611	50.1	7.0	379	85.8
6. Instructional Supplies & Materials	0.0	458		0.0	425		0.0	482		0.0	595		0.0	529	
7. Student Support	5.2	1,072	75.8	4.2	826	107.8	3.2	816	114.6	4.2	718	95.5	7.2	871	83.5
Total Instructional	*40.7*	*8,519*	*9.7*	*42.2*	*8,169*	*10.7*	*29.2*	*7,097*	*12.6*	*39.2*	*7,908*	*10.2*	*52.2*	*7,282*	*11.5*
Non-Instructional															
8. Administration															
Principal/Assistant Principal	1.0	330		2.0	461		1.0	349		1.0	312		2.0	347	
Clerical	2.0	241		3.0	306		2.0	254		1.0	113		3.0	232	
Administration Supplies & Equipment	0.0	45		0.0	30		0.0	44		0.0	56		0.0	38	
Total Administration	3.0	616		5.0	796		3.0	646		2.0	481		5.0	618	
9. Technology	1.0	389		1.0	305		0.0	140		1.0	357		1.0	224	
10. Security	1.0	104		2.0	157		1.0	108		1.0	96		2.0	133	
Total Non-Instructional	*5.0*	*1,109*	*78.8*	*8.0*	*1,258*	*56.6*	*4.0*	*895*	*91.2*	*4.0*	*934*	*100.2*	*8.0*	*975*	*75.1*
Total School	**45.7**	**9,630**	**8.6**	**50.2**	**9,427**	**9.0**	**33.2**	**7,992**	**11.1**	**43.2**	**8,842**	**9.3**	**60.2**	**8,257**	**10.0**

* Bilingual Centers ; ** Operating in 2 buildings
Note: Cost per pupil uses average salaries for the district.
Source: Goertz, Gross & Weiss, 2005.

Table 12

Percent Proficient on NJ State Assessments (General Education Students Only), 1999-2005

	Abbott Districts	Non-Abbott Districts	Gap
Grade 4 Language Arts			
2000-01	63%	95%	32%
2004-05	77%	95%	18%
Grade 4 Mathematics			
1998-99	36%	75%	39%
2004-05	72%	90%	18%
Grade 8 Language Arts			
1998-99	61%	92%	31%
2004-05	58%	87%	29%
Grade 8 Mathematics			
1998-99	36%	78%	42%
2004-05	42%	78%	36%
Grade 11 Language Arts			
2001-02	72%	95%	23%
2004-05	79%	95%	16%
Grade 11 Mathematics			
2001-02	46%	83%	37%
2004-05	59%	90%	31%

Source: Education Law Center (2006).

Table 13

Scale Scores on NAEP, New Jersey, 1994-2005

	Central City	Urban Fringe	State
Grade 4 Reading			
2005	209	224	223
2003	201	228	225
1994[n]	190	225	219
Grade 4 Mathematics			
2005	233	245	244
2003	219	241	239
1996[n]	213	229	227
Grade 8 Language Arts			
2005	251	270	269
2003	250	269	268
Grade 8 Mathematics			
2005	260	285	284
2003	255	283	281

n = Accommodations were not permitted for this assessment.

Source: NCES (2005).

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Appendix A-1: School Finance Statistics (CPI Adjusted), Districts Grouped by Wealth Septile, 1984-85 to 2005-06

Septile_84	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	18	156,778	$80,107	$1,370	$4,004	$5,374	1.71
2	49	163,174	148,733	2,042	3,453	5,495	1.37
3	98	158,083	239,115	3,401	2,561	5,962	1.42
4	96	160,630	307,707	4,397	1,880	6,277	1.43
5	85	160,490	386,016	5,587	1,114	6,701	1.45
6	81	160,845	490,535	6,791	603	7,394	1.38
7	126	160,302	841,057	7,271	544	7,815	0.86
State Average	553	1,120,302	356,806	4,415	2,018	6,434	1.24

Septile_89	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	29	151,088	$170,864	$1,978	$5,695	$7,673	1.16
2	71	153,403	287,289	3,063	4,435	7,498	1.07
3	83	151,419	473,135	4,802	3,369	8,171	1.01
4	81	151,997	611,571	6,251	2,333	8,584	1.02
5	75	153,683	784,050	7,868	1,039	8,907	1.00
6	80	152,857	1,027,609	9,289	724	10,013	0.90
7	134	152,427	1,696,949	10,309	658	10,968	0.61
State Average	553	1,066,874	722,408	6,230	2,602	8,832	0.86

Septile_93	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	24	161,367	$157,289	$1,875	$7,574	$9,449	1.19
2	45	166,458	263,913	3,071	5,329	8,400	1.16
3	117	162,318	389,620	5,129	3,568	8,697	1.32
4	75	165,657	495,520	6,475	2,814	9,289	1.31
5	70	155,251	614,095	8,190	1,223	9,413	1.33
6	81	172,129	785,431	9,767	493	10,260	1.24
7	142	165,776	1,313,330	11,334	196	11,530	0.86
State Average	554	1,148,954	576,953	6,572	3,013	9,585	1.14

Septile_96	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	25	170,949	$145,251	$1,930	$7,568	$9,498	1.33
2	62	171,707	238,122	3,139	5,368	8,506	1.32
3	104	170,947	357,597	5,426	3,054	8,480	1.52
4	78	172,039	449,715	6,600	2,392	8,992	1.47
5	63	166,810	550,476	8,085	917	9,003	1.47
6	83	176,633	700,750	9,782	279	10,061	1.40
7	138	172,336	1,163,217	10,858	28	10,886	0.93
State Average	553	1,201,419	516,289	6,559	2,793	9,352	1.27

Septile_00	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	24	183,994	$135,083	$1,640	$8,188	$9,828	1.21
2	71	182,359	230,578	3,089	5,997	9,087	1.34
3	92	187,074	336,535	5,143	3,383	8,526	1.53
4	81	184,998	427,566	6,441	2,436	8,877	1.51
5	63	179,544	523,460	7,938	945	8,883	1.52
6	80	184,256	663,057	9,712	299	10,011	1.46
7	140	190,606	1,129,901	10,727	75	10,803	0.95
State Average	551	1,292,830	495,409	6,403	3,034	9,437	1.29

Septile_05	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
1	31	188,500	$189,124	$1,551	$11,235	$12,855	0.78
2	73	197,750	319,657	3,753	7,129	10,954	1.14
3	96	193,770	474,736	6,771	2,916	9,687	1.43
4	74	194,869	603,848	8,331	1,875	10,251	1.34
5	59	187,201	735,163	9,320	1,162	10,482	1.27
6	82	198,639	901,318	11,381	263	11,644	1.26
7	136	196,097	1,570,971	12,337	99	12,437	0.77
State Average	551	1,356,826	687,815	7,702	3,499	11,178	1.10

Source: Author's analysis of state aid databases.

Appendix A-2: School Finance Statistics (CPI Adjusted), Districts Grouped by Wealth, Abbott Districts Separate, 1984-85 to 2005-06

Quartile_84	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	284,843	$119,641	$1,797	$3,745	$5,542	1.50
Low Wealth	45	62,230	156,513	2,116	3,084	5,200	1.35
Middle Wealth	271	452,082	314,519	4,524	1,810	6,334	1.44
High Wealth	207	321,147	665,499	7,031	574	7,604	1.06
State Average	553	1,120,302	356,806	4,415	2,018	6,434	1.24

Quartile_89	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	262,560	$278,161	$3,047	$4,832	$7,879	1.10
Low Wealth	80	101,916	270,260	2,816	4,523	7,338	1.04
Middle Wealth	230	399,445	642,177	6,479	2,096	8,575	1.01
High Wealth	213	302,953	1,365,316	9,808	691	10,499	0.72
State Average	553	1,066,874	722,408	6,230	2,602	8,832	0.86

Quartile_93	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	277,912	$222,805	$2,679	$6,534	$9,212	1.20
Low Wealth	46	71,727	252,539	3,068	5,062	8,130	1.21
Middle Wealth	256	464,523	499,707	6,578	2,524	9,102	1.32
High Wealth	222	334,793	1,047,612	10,544	330	10,875	1.01
State Average	554	1,148,954	576,953	6,572	3,013	9,585	1.14

Quartile_96	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	274,412	$192,863	$2,598	$6,879	$9,478	1.35
Low Wealth	64	90,253	248,219	3,384	4,403	7,786	1.36
Middle Wealth	239	490,427	454,383	6,708	2,085	8,793	1.48
High Wealth	220	346,328	930,079	10,312	140	10,452	1.11
State Average	553	1,201,419	516,289	6,559	2,793	9,352	1.27

Quartile_00	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	285,561	$181,451	$2,153	$7,733	$9,886	1.19
Low Wealth	71	98,692	240,959	3,655	4,685	8,340	1.52
Middle Wealth	231	536,204	429,536	6,516	2,214	8,730	1.52
High Wealth	219	372,374	898,466	10,229	175	10,404	1.14

State Average	551	1,292,830	495,409	6,403	3,034	9,437	1.29

Quartile_05	NumDist	Enroll	Mean_EqValPP	Mean_TotLocRevPP	Mean_TotEqAidPP	Mean_RegEdBudPP	TaxRate
Abbott_30	30	289,184	$270,450	$2,008	$10,887	$12,928	0.72
Low Wealth	79	113,775	306,356	5,062	4,255	9,300	1.57
Middle Wealth	225	561,513	603,198	8,191	1,866	10,072	1.34
High Wealth	217	392,354	1,227,150	11,845	172	12,018	0.96
State Average	551	1,356,826	687,815	7,702	3,499	11,178	1.10

Source: Author's analysis of state aid databases.

Appendix B: School Finance Adequacy in Kentucky, Arkansas and Wyoming: Implications for Other States

Allan Odden

Kentucky is acknowledged to be one of the first, if not the first state, to design and implement a new school finance system in response to a state Supreme Court order requiring the state's school finance system not only to be equitable but also to be adequate. Since that June 1989 court decree nearly half the states have come under school finance adequacy court decrees. In 1997, The Wyoming Supreme Court, in *Campbell County v. State*[37] (hereinafter *Campbell I*), ruled that state's school funding system unconstitutional. The Wyoming Supreme Court determined that education was a constitutionally protected "fundamental interest." The Court directed the Legislature to define a "proper" education – "the basket" of educational goods and services – every child in Wyoming should receive.[38] More recently, in November 2002, Arkansas came under a similar state Supreme Court order to design a system that was both equitable and adequate, with adequate defined as state commitment to "maintain a general, suitable and efficient system of free public schools" (*Lake View v. Huckabee*).[39]

In response, these – and other states – redesigned their school finance structures and also initiated changes in the state's curriculum, testing and accountability systems, all designed both to meet the courts' demands and to boost student achievement.

Kentucky is a state with a total population of 4,146,000, public school enrollment of 645,700 and an average per capita income of $27,265 in 2004. Wyoming is a state with a total population of 507,000, public school enrollment of 84,200 and an average per capita income of $34,279in 2004. Arkansas is a state with a total population of 2,753,000, public school enrollment of 448,000 and an average per capita income of $25,814 in 2004. Though these states are different demographically and in many other ways from California, their experiences with school finance adequacy do have implications for California, should it decide to address the school finance adequacy issue.[40]

This report first sets the legal and constitutional context for each state and then describes the nature of the new school finance system in each of these states, describes the equity impacts of the new system, summarizes changes in revenues per pupil over time, and discusses what is known about how the new resources were used at the local level after the reform. Section 2 outlines some of the educational program changes that were implemented either as a response to

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[37] *Campbell County School District v. State*, 907 P2d 1238 (Wyo. 1995)
[38] *Campbell I*
[39] *Lake View School District No. 25 v. Huckabee*, 351 Ark. 31, 91 S.W.3d 472 (2002), cert den. sub. nom. *Wilson, J.L., et al. v. Huckabee, Gov. of Ark., et al.*, 538 U.S. ___ (2003) (Orders of May 19 at 5).

[40] Total population & school enrollment from 2005 NCES Digest: http://nces.ed.gov/programs/digest/d05_tf.asp; Avg. per capita income from U.S. Dept. of Commerce: http://www.bea.gov/bea/regional/reis/scb.cfm

the court order or simultaneously with the implementation of the new school finance systems. Section 3 provides information on the impact of the combined changes on student academic performance using data from both the state testing system and the National Assessment of Educational Progress. The last section discusses these findings in light of the emerging key issues in all three states – how they can insure that the additional dollars provided will be used for educational strategies at the school and district level that will make a more dramatic impact on student learning gains, with a goal of "doubling student performance" over the next ten years.

I. THE LEGAL CONTEXT

Each of these three states responded to a decree from its own state Supreme Court requiring it to create a fair and adequate school finance structure. Although there were differences in specific constitutional language, the thrust of the court decrees were more similar than different. Even though Kentucky's mandate was seemingly more expansive – requiring the state to redesign the entire education system including curriculum, governance and finance – nearly all subsequent states were engaged in the same thing via their approaches to standards based education reform, so a court decree for an adequate school finance system emerged as the states were simultaneously seeking to restructure the finance, curriculum, instruction, testing and accountability systems.

Kentucky

In response to the landmark ruling of the Kentucky Supreme Court in *Rose* v. *Council for Better Education*[41] in June 1989, the Kentucky General Assembly dramatically changed the system of public K–12 education in that state. Among the many components of that ruling, the Kentucky Supreme Court upheld an earlier circuit court ruling[42] holding that the state's school finance system violated the Kentucky constitution's education clause, which requires the general assembly "to provide an efficient system of common schools throughout the Commonwealth."[43] In assessing the constitutionality of the Kentucky school finance system, the circuit court had found that (Augenblick, 1991):

1. There was marked variation in property wealth of school districts,
2. The allocation of state aid did not compensate for the variation in wealth,
3. There was a wide disparity in the per-pupil revenue of schools districts, and
4. The quality of education was contingent on available revenue.

The circuit court concluded that an efficient school finance system required substantial uniformity and substantial equality of financial resources.

The court actually overturned the entire Kentucky public education system – its curriculum, governance and its funding. The ruling applied to the "entire sweep of the system – all its parts and parcels," including all laws, regulations, state and local governance structures,

[41] Rose v. Council for Better Education, Inc., 88-SC-804-TG (Ky. 1989).
[42] Council for Better Education, Inc. v. Wilkinson, 85-CI-1759 (Franklin Cir. Ct., Div. I, Ky. May 31, 1933).
[43] Kentucky Constitution Sec. 183. Improving State School Finance Systems.

funding, school construction and maintenance, and teacher certification, indeed the "whole gamut of the common school system" in the state.

Further, in its decision, part of which were later lifted word for word and placed into school finance adequacy decisions in Alabama and Rhode Island, the court defined the minimum requirements for an efficient school system:

1. Establishment, maintenance and funding of common schools are the sole responsibility of the General Assembly.
2. It is free to all.
3. It is available to all Kentucky children.
4. It is substantially uniform throughout the state.
5. It provides equal educational opportunities to all Kentucky children, regardless of place of residence or economic circumstance.
6. It is monitored by the General assembly to assure that there is no waste, duplication, mismanagement or political influence.
7. It operates under the premise that an adequate education is a constitutional right.
8. Funding from the General Assembly must be sufficient to provide each child with an adequate education.
9. An adequate education is defined as one which develops the following seven capacities:
    a. Oral and written communication skills necessary to function in a complex and changing civilization.
    b. Knowledge of economic, social and political systems that inform student choices.
    c. Understanding of governmental processes as they affect the community, state and nation.
    d. Sufficient self-knowledge and knowledge of one's mental and physical wellness.
    e. Sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage.
    f. Sufficient training or preparation for advanced training in academic or vocational skills to choose and pursue ones' life's work intelligently.
    g. Skills enabling students to compete favorably with students in other states.[44]

In addition to the above, the court was clear that it was the "sole" responsibility of the state for educational improvements at all levels, thus requiring the state to establish, maintain, fund and monitor local schools, and making the state responsible for any shortcomings in local administration and running of the schools.

Kentucky's decision in the *Rose* case pretty much launched the school finance adequacy movement around the country. As noted above, in the years after that state's supreme court decision, other states' supreme courts took the above language out of the decision and placed it into their own decisions finding state systems of school funding inadequate as well as inequitable. However, the Kentucky court still is the most sweeping decision, as it overturned everything about the Kentucky public education system, something no other state supreme court has done.

[44] Rose at 212-213.

Beginning in 2003, however, cases that challenge the current adequacy of the Kentucky SEEK system were filed. The argument was that while perhaps adequate in 1991, the system is not adequate today.

Wyoming[45]

In 1997, The Wyoming Supreme Court, in *Campbell County v. State*[46] (hereinafter *Campbell I*), ruled the state's school funding system was unconstitutional. The Wyoming Supreme Court determined that education was a constitutionally protected "fundamental interest." The Court directed the Legislature to define a "proper" education – "the basket" of educational goods and services – every child in Wyoming should receive.[47]

In response to the Court's ruling, the Wyoming block grant funding model was developed. In essence, the purpose of this effort was to define the basket of educational goods and determine the cost of providing them for all public school children in Wyoming. The model developed in 1997 used professional judgment panels to establish prototype schools and the resources they would need to provide the basket. As required by the Court, the funding system needed to rely on a cost-based funding model.

Once implemented, the model was challenged in court in *State v. Campbell County School District*[48] (hereinafter *Campbell II*). In February, 2001, the Wyoming Supreme Court found that the core of the funding model and the methodologies used to cost out the resources within the model were constitutional. Although the court found that core of the funding model – the prototypes for elementary, middle, and high schools – was constitutional, it found that some individual components of the funding model did not meet constitutional muster and required the Legislature to revise them. Subsequently, the legislature enacted a number of revisions to the funding model and implemented them in the 2002-03 school year.

Faced with the Court's first ruling in *Campbell I*, the state undertook an effort to define a proper education and then to determine the resources needed to provide the educational basket that defined a proper education. A professional judgment approach using the expert views of educators from both within and outside of Wyoming was used to estimate the resources needed to provide the educational basket for prototypical elementary, middle and high schools, with an assurance that all, or almost all, school children would meet Wyoming's educational standards.

The core of the Wyoming funding model up to 2006 was based on three school-level prototypes – an elementary school of 264 students (with half-day kindergarten), a middle school of 300 students, and a high school of 600 students – and the personnel and non-personnel resources within those prototypes. The resources within those school-level prototypes were enumerated through the professional judgment methodology, a process of engaging professional educators in determining the appropriate levels of resources within a school to meet a given

[45] This section is taken almost in whole from Odden, Picus, Goetz, Fermanich, Seder, Glen and Nelli (2005).
[46] *Campbell County School District v. State*, 907 P2d 1238 (Wyo. 1995)
[47] *Campbell I*
[48] *State v. Campbell County School District*, 19 P.3d 518 (Wyo. 2001)

standard set by the state based on their professional expertise and experiences. The Wyoming Supreme Court in *Campbell II* found that the average class sizes and staffing levels determined in the school prototypes "not unreasonable" and "capable of supporting a constitutional school finance system."

In addition to the school-based prototypes, resources (and their costs) for district administration were included in the Wyoming cost-based funding model. District special education and transportation program expenditures were reimbursed one hundred percent by the state.

In addition to defining the basket of educational goods and services to be provided and enumerating the resources necessary to deliver the education basket, the Wyoming Supreme Court also ruled that the conversion of those personnel and non-personnel resources into dollars was to be cost-based. The costs of the resources to deliver the basket – teachers, administrators, books, materials and physical resources, etc. – were calculated through a variety of methodologies in an attempt to make the prototypes and the funding model "cost based" in compliance with the Court's directives. The initial calculation of the costs of the funding model set the model to 1997 cost levels.

The Wyoming Supreme Court recognized that the costs of a proper education would likely differ according to student needs (e.g., at-risk students), curriculum (e.g., vocational education), school circumstances (e.g., economies and diseconomies of scale associated with size), and district circumstances (e.g., diseconomies of scale associated with small size or regional cost differences). Accordingly, the Wyoming funding model incorporated adjustments for above-average concentrations of at-risk students, small schools, small districts, vocational education programs, and regional cost differences. The Wyoming funding model also made cost adjustments to school districts for cost differences associated with the education levels of teachers, administrators and classified personnel, as well as for years of experience, and/or relative job responsibilities. Accordingly, the funds provided to school districts for certified and classified staff salaries reflect the court's requirement that adjustments for these identifiable cost differences are made.

To determine the personnel and non-personnel resources necessary to deliver the basket of educational goods and services for the original Block Grant, it was assumed that the school prototypes had the average concentration of at-risk students. That is, the personnel and non-personnel resources specified by the professional judgment panels within the base school-level prototypes to deliver the educational basket were estimated under the assumption that the school had average student characteristics for a Wyoming school, approximately 30 percent at-risk student incidence. In the *Campbell II* ruling, the Wyoming Supreme Court found the school-level prototypes to be constitutional both in nature and in the methods used for determining their costs.

The third component of the *Campbell I* ruling was the requirement that a funding mechanism for delivering the basket be established. Once a "proper" education (the basket) was defined by the Legislature and the resources to deliver the basket and their costs were determined, the Legislature implemented a block grant funding model. The block grant model generated resources at both the school and district levels. The resources were then aggregated to

the district level and the state provided school districts with a block grant equal to the level of resources generated through the cost-based model. The block grant resulted in few restrictions as to how districts spend those resources. Per ADM funding through the cost-based block grant funding model for 2005-06 ranged from $8,257 for Natrona (Casper) to $25,5423 for Washakie #2, with $9,283 for the state as a whole.

In addition to the funding model, the Legislature created educational and support programs outside of the Wyoming cost-based funding model. For the 2004-2005 school year, these programs included: summer school ($4.5 million); full-day kindergarten option ($6.0 million); the Wyoming Reading Assessment and Remediation Act that targets students in grades 1 and 2 ($3.8 million).

In its *Campbell II* ruling, the Wyoming Supreme Court directed the Legislature to adjust the model for inflation (known in Wyoming as the External Cost Adjustment) at least biennially and further directed the Legislature to review – recalibrate – all model components "every five years...to assure it remains an accurate reflection of the cost of education." The state's efforts to make sure the costs of the model are up-to-date on a regular basis led the state to a full recalibration of the funding model in 2002. Since 2001-02, the state has adjusted the costs within the model using an external cost adjustment to account for inflationary pressures on the costs of the goods and services contained in the basket of educational goods.

Wyoming law states that "[n]ot less than once every five (5) years, the legislature shall provide for the reevaluation of the education resource block grant model to determine if modifications are necessary to ensure it remains cost-based in light of changing conditions and modifications to law (W.S. 21-13-309(t))." The Legislature contracted with Lawrence O. Picus & Associates in 2005 to conduct a model recalibration to ensure the model remains cost based in time. The recommendations from that study, described in the next section, were enacted during the 2006 budget session for implementation in the 2006-07 school year.

Arkansas[49]

The recent Arkansas involvement in major school finance change began with a court ruling on November 21, 2002 when the Arkansas Supreme Court upheld an earlier Chancery Court ruling declaring the school finance system of Arkansas to be both inequitable and inadequate. The high court found that the state was not meeting its constitutional commitment to "maintain a general, suitable and efficient system of free public schools" (*Lake View v. Huckabee*).[50] The court held that as part of remedy, the state must conduct a school finance adequacy study, pointing out that such a study had been called for in court rulings in 1994,[51] and again by Judge Kilgore in his 2001 Chancery Court ruling.[52]

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[49] This section was taken almost wholly from Odden, Picus, and Goetz (2006).

[50] *Lake View School District No. 25 v. Huckabee*, 351 Ark. 31, 91 S.W.3d 472 (2002), cert den. sub. nom. *Wilson, J.L., et al. v. Huckabee, Gov. of Ark., et al.*, 538 U.S. ___ (2003) (Orders of May 19 at 5).

[51] See *Lake View School District No. 25 v. Tucker*, No. 92-5318 (Pulaski County Chancery Court, November 9, 1994 as modified December 21, 1994)

[52] *Lake View School District No. 25 v. Huckabee*, No. 92-5318 (Pulaski County Chancery Court, May 25, 2001) http://zebra.wsc.k12.ar.us/collinswork.pdf

Lawrence O. Picus and Associates was employed to conduct that study which resulted in the September 2003 report *An Evidence Based Approach to School Finance Adequacy in Arkansas*.[53] That study recommended substantial increases in funding for Arkansas schools. The model used research based designs of prototype schools to estimate funding levels. It also developed a "carry forward" to estimate district level expenditures for operations and maintenance, central office administration and board services, transportation and food services that also needed to be funded.

During special sessions of the Arkansas Legislature in late 2003 and early 2004 a new funding model was approved. Using the results of the adequacy study done by Odden, Picus and Fermanich in 2003, the Legislature in Act 59 – the new funding law – converted the prototype school-based funding models developed in the adequacy study into a per pupil funding level. A funding level of $5,400 was established based on a K-12 school/district with 500 students. Using this figure, the Legislature established a foundation program to fund the state's schools. In addition to the base funding – or foundation – level, the funding program included a number of categorical programs for at risk students.

Other actions included appropriation of $2.1 billion in funding, an increase in the sales tax of 7/8 of a percent, and the combining of all school districts with fewer than 350 students into neighboring districts, reducing the number school districts in Arkansas from 308 to 251.

Following a report submitted by special masters appointed by the Arkansas Supreme Court, the Court issued a supplemental opinion in the long running *Lake View v. Huckabee* law suit on June 18, 2004. The High Court ruled that the actions of the Arkansas Legislature to establish a "general, suitable and efficient system of public schools" (Arkansas Constitution, Article 14, Section 1) were adequate and further action in this matter should await implementation of the Acts passed by the Legislature.

During the 2005 Legislative session the foundation level of $5,400 was not changed for 2005-06, although the Legislature did provide an additional $35 million in funding for health benefits for school district employees. The 2005 law increased the foundation expenditure per pupil level to $5,497 for 2006-07. The Legislature also appropriated substantial sums of money to begin the process of bringing the state's school facilities up to an adequate standard following the completion of an extensive review of all facilities in the state.

It is within this context that the Rogers School District in Northwest Arkansas and the original plaintiff districts in the *Lake View* case filed motions to re-open the suit claiming that the 2005 actions were insufficient. In response the Supreme Court reappointed the special masters who concluded generally in October 2005 that funding for the 2005-06 school year was not adequate because the foundation level had not been increased to adjust for the increased costs experienced by school districts. The court suggested that the determination of funding levels appeared to be a function of available resources and not the needs of school districts. The Supreme Court accepted most of the Master's findings and recommendations, and in particular held that the state had not conducted an appropriate recalibration of the adequacy study to

[53] Odden, A., Picus, L.O. and Fermanich, M. (2003). *An Evidence Based Approach to School Finance in Arkansas*.

ascertain what funding levels for 2005-06 and 2006-07 should be. The Court further established a deadline of December 1, 2006 for the Legislature to find a solution.

The legislature decided to respond to these court requirements in a special session convened in the first week of April 2006. During that special session, the legislature enacted modifications to the funding formula for both the 2005-06 and 2006-07 school years. Specifically, it increased the per pupil amount in the foundation formula from $5,400 to $5,486 for 2005-06 and to $5,620 for 2006-07. In determining these funding levels, the state increased the salary levels used to calculate the per pupil number from the 2004-05 figures by 3.3 percent for 2005-06 and another 3.55 percent for 2006-07. It increased state funding for retirement to cover the increased charge for retirement of 14 percent of salary, and rescinded a previous decision that had allowed the retirement board to increase the retirement charge to 15 percent. The special session also added appropriations for facilities ($50 million for 2005-06), declining enrollment ($10 million for 2006-07) and isolated schools ($3 million for 2006-07).

Even before the 2006 Court decree, the legislature in the fall of 2005 issued an RFQ for a recalibration study. Lawrence O. Picus and Associates was employed to recalibrate the funding level for Arkansas schools beginning with the 2007-08 school year.[54] The objective was to identify a recalibrated per pupil figure for the foundation program, which "unpacked" the carry forward figure of $1152 which represented the actual expenditures for central office administration, curriculum support, operations and maintenance and transportation in 2002, and to identify how schools had used the funds in the 2004-05 school year and whether actual use represented the uses and strategies that produced the new funding system.

Summary

All three states were under court order to revise their school finance systems to make them equitable as well as adequate. Only Wyoming and Arkansas, however, were sued immediately after the legislature responded. The courts also found that the new systems, while improvements, still were not adequate, and both states went back and made additional modifications. Further, both Wyoming and Arkansas enacted laws that required the state to periodically "recalibrate" the school finance system to insure that it kept current; recalibration was required every five years in Wyoming and every two years in Arkansas. In part because there was no requirement for recalibration in Kentucky, the system is now under legal challenge again, as it has not been formally reviewed for adequacy by the legislature since initially enacted.

[54] Picus and Associates also is conducting three additional studies, one that surveys districts on a number of specific items related to how dollars are spent on education in the state, a second to analyze broad spending patterns and any significant changes in overall spending patterns over the past three school years, and a third to identify how 107 randomly selected schools used resources by educational strategy.

II. THE NEW SCHOOL FINANCE STRUCTURES

As indicated above, all three states designed, funded and implemented completely restructured school finance systems. This section describes the main features of these new school finance structures. Although different in funding level and specific structure, the three new systems basically represent higher level "foundation" programs with expanded categorical programs for students with special needs, including students from lower income family backgrounds, students whose native language is not English and thus need to learn English as well as academic content, students with disabilities and gifted and talented students.

The New Kentucky School Finance System[55]

In response to the ruling in *Rose*, the Kentucky General Assembly completely overhauled the organization and structure of K–12 education, and created a new school finance system. The new finance system, called Support Education Excellence in Kentucky, or SEEK, was designed to dramatically improve the equity of Kentucky's school finance system.

Kentucky's SEEK school finance program was the first in the country to be designed to provide an "adequate" funding base for each school within the state. In response to the Kentucky Supreme Court's ruling in Rose v. Council for Better Education, [790 S.W. 2d 186 (Kent. 1989)], which stated that the funding system must be adequate, substantially uniform and provide an equal opportunity for all children in Kentucky, the General Assembly created a comprehensive new educational system. Among its components were: content standards that prescribed the curriculum to be taught all students; a new testing system that measured student learning related to those content standards; an aligned accountability system that offered rewards for schools making progress towards those standards, help for struggling schools, and sanctions for schools continuously failing to make progress; and, the SEEK school finance formula designed to provide the needed educational resources – that were both equitably distributed and adequately funded.

Developed a decade and a half ago as part of Kentucky's wide-ranging school reform, the SEEK formula has not been substantially revised since its inception. For 2005-06, the SEEK formula relied on three levels of funding for school districts as described next.

Adjusted Base Guarantee. This is a foundation program that provided each district with $3,445 per pupil (2005–06) through a combination of local taxes and state aid. The number of pupils is adjusted by a series of factors or "add-ons" that affect the cost of providing services to students including:

- A pupil-weighting system for exceptional children with special needs. This includes extra weights of 2.35 for severely handicapped children, 1.17 for moderately handicapped children, 0.24 for children requiring speech programs and 0.075 for children with Limited English Proficiency.
- A transportation adjustment based on the population density of a school district.

[55] This section draws heavily from Odden and Picus (forthcoming).

- A weight of 0.15 for students participating in the free lunch program.
- An adjustment for students unable to attend regular school due to short-term health problems.

Each district levies a property tax of 30 cents per hundred dollars of assessed value (or 3 mills), or an equivalent amount through a combination of taxes for school purposes on utilities, motor vehicles, occupational license receipts, or as an excise tax on income. The difference between the foundation guarantee and the district's locally raised revenue is provided by the state. The amount of the unadjusted per-pupil basic allotment for each of the 16 years from 1991–2006 is displayed in Table 1.

TABLE 1

Adjusted Base Guarantee and Tier I Equalization Level in Kentucky: 1990–91 through 2005–06

Year	Adjusted Base Guarantee ($ per ADA)	Tier I Equalization Level ($ per ADA)
1990–91	2,305	225,000
1991–92	2,420	225,000
1992–93	2,420	280,000
1993–94	2,495	280,000
1994–95	2,517	295,000
1995–96	2,593	295,000
1996–97	2,673	365,000
1997–98	2,756	365,000
1998–99	2,839	410,000
1999–00	2,924	410,000
2000-01	2,994	470,000
2001-02	3,066	470,000
2002-03	3,081	545,000
2003-04	3,191	545,000
2004-05	3,240	587,000
2005-06	3,445	587,000

Tier I. This is an optional component that allows a district to raise up to an additional 15 percent of the adjusted base guarantee ($3,445 for 2005-06) through an equalized property tax or property tax equivalent. Districts with property wealth less than 150 percent of the state average receive state equalization aid that makes up for the difference between the local tax base and equalization level. For 1999–00, the Tier I equalization level was $410,000, and it grew to $587,000 for 2005–06. Table 1 also shows the equalization level for Tier I for each year from 1991 to 2006. It should be noted that fiscal year 1994–95 was the first year in which a uniform system of valuing property at 100 percent of real value was required across Kentucky.

Tier II. Another optional component of the system allows school districts to generate additional revenue up to 30 percent of the total of the adjusted base guarantee plus the revenue generated in Tier I. This revenue is not equalized by the state.

Thus, a district taking full advantage of both Tier I and Tier II authority could raise a total of $5,150 per ADA before the add-ons are computed. This is 49.5 percent higher than the adjusted base guarantee. Obviously, the add-ons for special education, compensatory education, and transportation establish a unique (and slightly higher) adjusted base guarantee for each individual district. However, the formula still allows each district to raise nearly half again as much as the adjusted guarantee.

In addition to the funding in the SEEK formula, the state provides limited funding to school districts through a number of categorical programs including programs for state agency children, gifted and talented, early childhood education, vocational education, textbooks, teacher testing and internships, staff development, family resource/youth service centers, and regional service centers. These programs are relatively small, and according to Murray (2001) represented less than 9 percent of total state aid in 1998–99.

Further, the state provided major new funding for school construction, debt service and school renovation. The foundation program included $100 per pupil for every district for this purpose. In addition, the state equalized the an additional 0.5 mill tax rate for school facilities; the equalization was guaranteeing that that additional 0.5 mill (or nickel or 5 cents per $100 per pupil of assessed valuation), would be applied to 150 percent of the statewide average property wealth per pupil, the same equalization level as Tier 1 of the foundation program. In 2004, the state added several additional aid programs for facilities, focusing largely on district with growing student populations.

Equity impacts. Recently, Picus, Odden & Fermanich (2004) conducted a 10 year analysis of the equity of the SEEK formula, concluding that equity had actually improved over the ten year period, and finding that in the 2000-2001 school year, the Kentucky SEEK formula met the benchmarks of several statistical measures for school finance equity. The authors further concluded that when the fiscal numbers were adjusted by weights used to reflect different student needs and by a geographic price of education index (that quantified the varying purchasing power of the educational dollar across geographic regions in Kentucky holding quality of education resources constant), the equity statistics beat the benchmarks by even wider margins. The authors concluded that while not perfect, the SEEK school finance formula was equitable according to standard definitions (Odden & Picus, 2004).

The conclusions of this equity analysis of the SEEK formula is similar to other equity studies conducted after the implementation of SEEK in 1990–91 (see Augenblick, 1991, and Adams, 1994). Further, a March 2006 analysis by Augenblick and DeCesare (2006) concluded that the SEEK formula continues to provide an equitable funding model for Kentucky.

The adequacy of SEEK. The SEEK formula was supposed to be adequate as well as equitable. However, the method used by the Kentucky Legislature to determine the initial “adequate” base SEEK revenue relied on what is essentially a “pragmatic” approach. As we understand it, the method used in 1990 was essentially to define "adequate" as all state funds that

were then expended for public schools, increased by an estimated additional cost for all state mandates that at that time were unfunded, as well as all local dollars then spent for schools. For the 1990-91 year, that produced a SEEK Base Guarantee of $2,305 per pupil. This value rose to $2,994 per pupil for 2000-2001, which was just short of keeping pace with inflation over those eleven years. In 2000-2001 terms, a fully inflation adjusted SEEK Base Guarantee would have been $3,160 per pupil (as the CPI rose by about 29 percent over the 1990s). Nevertheless, it would be fair to say that based on the methodology used in 1990, the SEEK base was about as adequate in 2001 in real terms as it was a decade before in 1990-91.

But the adequacy issue today is not really whether the SEEK base has been appropriately adjusted by some inflation figure or is adequate relative to the 1990-91 base. Rather the adequacy question today is whether the SEEK base provides sufficient funding for each school in the state to deploy powerful enough educational strategies to meet the state's 2014 student achievement and performance goals. Those goals seek to have all students performing at or above the proficiency level on the state's student testing system by 2014. This is a more complex and more substantive definition of adequacy than was used in 1990. Today, adequacy in Kentucky requires a more direct link between the funding base and educational strategies that have potential to allow Kentucky's students to meet or exceed the state's established proficiency levels.

As a result, the Kentucky Department of Education asked Lawrence O. Picus and Associates to conduct two different adequacy studies, one an evidence-based approach and the other a professional judgment approach. Both concluded that the $2994 per pupil base figure in 2001, which has only been adjusted modestly to a 2006 figure of $3445, was substantially below what would be considered adequate. A study commissioned by districts who ultimately filed an adequacy suite came to the same conclusion (Verstegen, 2001(check refs – 2002?).

In addition, Kentucky has been interested in how districts and schools are using the funds the state is providing, wondering whether local use represents the most effective and efficient ways to use education dollars, with the goal of achieving the student performance standards the state has set for all students for 2014.

The Wyoming Funding System

As discussed above in the legal section, Wyoming responded to the 1997 *Campbell* decree by creating a school-based funding system, with the specific resource recommendations deriving from a Professional Judgment approach (Guthrie, et al., 1997). It also required the state to "recalibrate" the system once every 5 years. Immediately after the initial system, however, districts filed suite claiming that the system was not adequate; the court agreed and the system was modified. Just about every year since that time, the districts have continued a legal claim that the system is not sufficiently adequate.

In 2005, Picus and Associates (Odden et al., 2005) was hired to recalibrate the system once again. The report retained school-based approach, but altered the size to 288 students in the elementary school, 315 in the middle school and 630 students for the high school. The following are the key features of the recommendations from that report, which was approved by an interim

legislative committee, and enacted with modest changes by the legislature in early 2006, bringing the funding level in Wyoming up to about $13,700 per pupil for the 2006-07 school year including federal dollars:

- Full day kindergarten for every elementary school
- Class size of 16 in grades K-5, and 21 for grades 6-12
- Core teachers calculated at elementary ADM divided by 16 and secondary ADM divided by 21
- Specialist teachers calculated at 20% of core teachers for elementary schools and 33 % for middle and high schools
- A variety of minimum teachers for very small elementary and secondary schools
- Instructional facilitators at 1.5 in the 288 ADM prototypical elementary school and 1.5 in the 315 ADM prototypical secondary school
- Tutors: 1 teacher position for every 100 at-risk students defined as the unduplicated count of students eligible for free and reduced price lunch and ELL students, plus some mobile students in secondary schools
- ELL: 1 teacher position for every 100 ELL students
- Extended day: 0.25 teacher positions for every 30 at risk students
- Summer school: 0.25 teacher positions for every 30 at risk students
- Alternative schools: 1 assistant principal position plus 1 teacher position for every 7 students
- Substitutes: additional 5 percent of ADM generated teachers
- Supervisory aides: 2 for the 288 ADM prototypical elementary school and 2.5 for the 315 ADM prototypical secondary school
- Pupil support: 1 teacher position for every 100 at risk students plus 1 FTE position for every 250 secondary students (grades 6-12)
- Librarian at 1.0 for each prototypical school, plus 1.0 librarian media tech position for the 315 prototypical secondary school
- 1 Principal for each prototypical school, down to 96 ADM elementary and 105 secondary school, and then prorated by ADM below those pupil levels, and with an assistant principal prorated up at the rate of 1 AP for every 288 elementary students and every 315 secondary students for schools above the prototypical ADM levels
- Secretary at 1.0 for 288 ADM prototypical elementary and 315 ADM prototypical secondary school, and clerical at 1 for the prototypical elementary and middle school, and 2 for the prototypical high school
- Books an instructional materials: $286/elementary and middle school pupil
  $350/high school ADM
- Computers and related equipment: $250 per ADM
- Gifted and talented: $25 per ADM
- Student activities: $250 per ADM
- Vocational Education: 0.29 times FTE Voc Ed ADM/21 additional teacher units
  $7,731/FTE Voc Ed teacher for equipment and supplies
- Assessment: $28.50 per ADM for local assessments
- Professional development in addition to the instructional facilitators/coaches at 5 extra days in teacher yearly contract at $250 a day, plus $100 per ADM for trainers

- Special education is 100 percent state reimbursed
- Central Office staff: District ADM below 500: 3 administrators and 3 secretaries
  500-1000: prorate up additional admin and sec position
  1000 ADM: 4 admin and 4 secretarial positions and proportionately increased for districts above 1000 ADM
- Central office expenses: $300 per ADM
- Transportation is 100 percent state reimbursed
- No state support for food services; assumed to be self supporting
- Maintenance and operations: New formulas based on ADM, gross square footage, number of buildings and rooms, for custodian, facilities maintenance and groundskeepers
- M & O supplies: $0.55 per 110 percent of gross square feet of instructional space
- Utilities: actual 2004-05 expenditures by districts inflated up each year by external cost adjustment
- Multiple adjustments for small schools (49 or fewer students) and small districts
- Salaries for 12 positions used to determine actual dollars, plus 19.66 percent plus $7235 for each person for health benefits
- Regional cost adjustment using the highest of a Wyoming cost of living index, an hedonic index or 1.0
- Annual external cost adjustments to keep dollar figures at real values over time

The state also pulled the instructional facilitators/coaches, summer school and extended day resources out of the block grant, but made them fully available to any district that applied for the resources. Further, when finally enacted, several of the specific dollar figures were increased to a 2005-06 base to calculate funding for 2006-07.

I have not calculated equity statistics for Wyoming because all funds are provided by the state, and there are no local add-ons.[56] To be sure, there are significant differences in dollars per pupil across Wyoming schools and districts, but ALL the differences are due to adjustments for pupil needs or small size of schools and districts or geographical price differences. Although *Education Week* traditionally gives Wyoming low marks for equity, it makes no adjustments for these significant and multiple school and district adjustments, or for the geographic cost adjustments, all of which are legitimate.

Arkansas[57]

Act 59 used a 500 student district and a 500 student K-12 school as the basis for determining the figure for the foundation expenditure per pupil level. It took the specific recommendations for each line item from the 2003 adequacy report conducted by Lawrence O. Picus and Associates, but also made some modifications. The following sections describe the standards and bases for the various elements that lead to the per pupil funding level, and the changes recommended to the legislature via the 2006 recalibration process.

[56] For a few very high property wealth districts, a "capped" recapture mechanism provides additional revenues above that provided by the formula, and these revenues can reach a high level of $42,500 per pupil for one district and $28,800 for another. The legislature has drafted a proposition to eliminate the cap that will be put before the voters this fall.

[57] Several paragraphs in this section are taken from Odden, Picus and Goetz (2006).

The foundation program. Arkansas standards require that every school district offer full-day kindergarten for each child who is age five on or before September 15. The per-pupil funding formula meets these standards by including resources to fund full-day kindergarten for those students who attend (about 8 percent of students served in Arkansas).

Arkansas Standard 10.02 addresses class size. It requires class sizes of no more than 20 students in kindergarten, an average of no more than 23 students in grades 1-3, and an average of no more than 25 in grades 4-6. The official school accreditation standards ratio for grades 7 to 12 is 30:1, though the limit on the number of students a teacher may be responsible for during a day is 150 which, if the practice is teach six classes, requires an average class size to 25:1. Act 59 essentially included these standards as indicated in the chart below that compares the accreditation standards to the class sizes in the Act.

Grade	Funding Formula	Accreditation Standards
K	20:1	20 (up to 22 with a part-time aide)
1-3	23:1	23 (average; and up to 25 in a classroom)
4-6	25:1	25 (average; and up to 28 in a classroom)
7-12	25:1	30 (with max of 150 students per teacher, which averages 25 per class if teachers instruct six periods a day and up to 30 students if teachers instruct for 5 periods a day)

Act 59 allocates resources for specialist teachers (e.g. music, art, physical education, electives teachers) at the rate of an additional 20 percent over core teachers.

There are no state standards that require the use of Instructional Facilitators. Instructional facilitators, instructional coaches or literacy and math coaches are individuals who help coordinate a school's instructional program but most importantly provide the critical ongoing instructional coaching and mentoring that the professional development literature shows is necessary for teachers to improve their instructional practice. The instructional facilitator allocation can be thought of as 1 position for every 250 students for content areas and 0.1 position for every 100 students for technology expertise, which produced 2.5 positions for a 500 student school. Though there are no state standards for instructional coaches, principal standards require a half-time "assistant principal, instructional supervisor, or curriculum specialist" in addition to a principal in schools with more than 500 students Since A\ct 59 includes resources for 2.5 Instructional Facilitators per 500 students, or one instructional facilitator position for every 200 students, and this allocation, in addition to the prorating up of principal resources for larger schools, satisfies the state standards as well as provides resources for instructional coaches in every school.

For years, Arkansas has provided resources to schools to provide services for students with disabilities on the basis of a "census funding" approach. This approach provides the same level of resources for all high-incident, low-cost special education students, and then has the state fund all or the vast bulk of expenditures for the lower incidence, but higher cost student with

disabilities. The 2003 adequacy study recommended continuing this approach and specifically recommended providing 2.9 special education staff for each of the 500 student prototypical school. The per-pupil figure of $5,400 in Act 59 includes these 2.9 positions. Act 59 also expanded Arkansas' approach to funding the higher costs of the high-cost student with disabilities, lowering the expenditure threshold from $30,000 to $15,000 per pupil, requiring districts to utilize local resources, including federal resources, for the difference between this threshold and the foundation level. The court appears to have accepted this approach by not finding it unconstitutional.

The 2003 adequacy report recommended resources for 1.0 librarian for the 500 student prototypical middle school, 1.5 librarian positions for the 500 student prototypical high school, and no librarian positions for the elementary school arguing that the librarian positions could be taken from the specialist teacher allocation. Arkansas Standard 16.02.3 requires a ½ licensed library media specialist for schools with less than 300 students, a full 1.0 licensed library media specialist for schools with more than 300 students, and 2 library media specialists for schools enrolling 1,500 or more students. Following the recommendations in the adequacy study, the Arkansas per-pupil funding formula, Act 59, allocates 0.7 librarians/media specialists for a 500 student K-12 school, the model on which the per pupil funding level was determined.

The 2003 adequacy report included a two-part recommendation for staff to provide pupil support services – guidance counseling, nurses, social workers, psychologists, family outreach, etc. The report recommended 1.0 position for every 100 National School Lunch (NSL) students plus a 1.0 FTE counselor for the 500 student prototypical middle school students, and 1 FTE counselor positions for every 250 high school students, or 2.0 positions for the 500 student prototypical high school. Other than the staff based on NSL student counts, there were no additional staff recommended for the elementary school. The Arkansas accreditation standards require that developmentally appropriate guidance services be provided and that, district wide, there needs to be at least one counselor position for every 450 students. Further, Arkansas Code 6-18-706(2003) requires 1 school nurse for every 750 students, if funds are available. In developing the per pupil formula for Act 59, the legislature dropped the pupil support staff based on NSL students, and provided 2.5 FTE positions for the 500 K-12 school/district.

In addition to the Instructional Facilitator and specialist teacher resources above, the 2003 adequacy study proposed $50 per pupil for teacher training and 5 extra days for teachers added to teacher contracts for intense professional development during the summer. Act 59 included both of these resources by providing $101 per student for the additional number of teacher days as well as the additional $50 per pupil for trainers. In addition, the state allocated resources for state created professional development. Further, the Arkansas Accreditation Standard 10.01.3 requires that all teachers have 10 days (60 hours) for professional development and in-service training, which now is consistent with the resources provided in Act 59.

Act 59 included $90 per pupil for extra duty funds. These funds are intended to be used as extra stipends for teachers who coach, supervise after school clubs or who undertake other related extra curricular duties.

Act 59 included $35 per pupil for supervisory aides. These funds are intended to be used to hire individuals to helps students get on and off buses in the morning and afternoons, and to supervise lunch and recess periods.

Act 59 includes substitute funds in the amount of $63 per pupil which equated to 10 days for every teacher in the 500 student prototypical school at the rate of $100 per day plus social security and state retirement, or $121 a day.

In brief, the model provided for the 500 student K-12 school:

- 1 Principal
- 20.8 Core Teachers, including teachers for full day kindergarten
- 4.2 specialist teachers at 20% of core teachers, for art, music, PE, etc.
- 2.5 instructional facilitators or coaches
- 0.7 librarian
- 2.9 teachers for students with mild or moderate disabilities
- 2.5 pupil support staff, i.e., guidance counselors and nurses
- $250 per pupil for books and other instructional materials
- $250 per pupil for computer technologies
- $101 per pupil for an extra five days in the teacher contract for ongoing professional development
- $90 per pupil for extra duties (clubs, athletics, etc.)
- $35 per pupil for supervisory aides
- $63 per pupil for substitute teachers.

Based on the consultants recommendations, Act 59 included a "carry forward" or an amount of money – $1152 per pupil – for expenditures not directly addressed by the above school-based model components, which primarily were school secretaries, operation and maintenance or school buildings, central office administration, curriculum and pupil support staff, and transportation.

The above resources produced the foundation expenditure per pupil level of $5400 when teacher and principal salary figures were attached to the above resources and converted to a per pupil amount.

Categorical programs. In addition, the state also provided:

- $50 per pupil for the *trainers needed for professional development.*
- 1.0 FTE position for every 100 NSL students to enable school districts to provide *tutoring* for students struggling to learn to academic standards. Rather than include this in the per pupil figure, which did not vary by school or district demographics, Act 59 provides resources for such services in a special categorical program. Using the average teacher salary and benefits that was used to calibrate the $5400 per pupil figure, that 1.0 FTE position for every 100 NSL students would equal $480 per NSL student. Act 59 also increased the level of resources as the percentage concentration of NSL students rose in the districts. Act 59 provides the following amounts for this program:

NSL Concentration	Amount per NSL Student
< 70 percent	$480
70 percent to < 90 percent	$960
90 percent or greater	$1,440

Thus, Act 59 provides 1 position for every 100 NSL students for districts with an NSL concentration below 70 percent, 2 positions for districts with an NSL concentration from 70 to 9- percent, and 3 positions for districts with an NSL concentration above 90 percent.

- A 0.4 FTE staff position per 100 low-income *ELL students*, which was about $195 per low income ELL student in the per-pupil funding formula.
- Funds for alternative learning environment (ALE) programs at the rate of 1 FTE teacher position for every 20 ALE students. When this recommendation was made, the ALE student count was a headcount rather than an FTE count.

Finally, and in addition to funds for the K-12 education program, the state also began phasing in a program for preschool services for all children from families with an income less than 200 percent of the poverty level, if those parents wanted their children to attend such a program.

As noted above, the state's Supreme Court found in a 2004 decision that the above structure met the constitutional mandate for an adequate education program. But as also noted above, when the legislature did not provide any adjustment to the above numbers, which were used to calculate state aid for the 2004-05 school year, for the 2005-06 and 2006-07 school years, several school districts filed a suit claiming that decision to be unconstitutional and the court agreed.

The legislature decided to respond to these court requirements in a special session convened in the first week of April 2006. During that special session, the legislature enacted modifications to the funding formula for both the 2005-06 and 2006-07 school years. Specifically, it increased the per pupil amount in the foundation formula from $5,400 to $5,486 for 2005-06 and to $5,620 for 2006-07. In determining these funding levels, the state increased the salary levels used to calculate the per pupil number from the 2004-05 figures by 1.6 percent for 2005-06 and another 2.4 percent for 2006-07. It increased state funding for retirement to cover the increased charge for retirement of 14 percent of salary, and rescinded a previous decision that had allowed the retirement board to increase the retirement charge to 15 percent. The special session also added appropriations for facilities ($50 million for 2005-06), declining enrollment ($10 million for 2006-07) and isolated schools ($3 million for 2006-07).

Equity in Arkansas.[58] In a recent analysis of the equity of the Arkansas school finance system in the years after the 2004 reform, Lawrence O. Picus and Associates found that Arkansas school funding is distributed in a relatively equitable manner as compared to other

[58] The following is taken largely from Ritter and Barnett (2006).

states (Ritter & Barnett, 2006). In fact, in previous publications by *Education Week* and *The Education Trust*, Arkansas was consistently ranked in the top twenty states for equity. The authors found that over the last two years, Arkansas' equity measures became even more favorable. The equity statistics in Table 2 were calculated after the desegregation funds were subtracted from the expenditures of the three Pulaski County School Districts.

The first three measures in Table 2 assess the inter-district variability in education resources. The first of these measures, the Coefficient of Variation, is a measure of the distribution of resources for all districts in the state of Arkansas. According to our calculations, the variation in the distribution of resources is becoming smaller between all districts. The second measure, the McLoone Index, reflects the equity in the bottom half of a state's revenue distribution. Generally, McLoone Index values above 0.90 are considered equitable, or "good". Arkansas has remained stable on this equity measure. The Federal Range Ratio reflects the overall dispersion of the distribution of resources between districts with revenues from the 5th to 95th percentile. This measure indicates how well resources are distributed among 90 percent of the students in the state – the 10 percent of the students in districts with outlier revenue figures are excluded. Arkansas has improved its equity value on this ratio, moving from .26 in 2003-04 to .25 in 2004-05.

Although the first three measures of equity are based on dispersion of resources without regard to district socioeconomic characteristics, the final three measures incorporate district wealth and poverty. The Fiscal Neutrality Correlation Coefficient and Wealth Elasticity measure the relationship between local wealth and local and state foundation revenue per pupil. According to the principle of fiscal neutrality, these two variables should <u>not</u> be related; therefore, a low correlation value is desired. The decrease in the fiscal neutrality measure from 0.59 to 0.50 indicates that our system is becoming more "equitable" as wealthier districts are now less likely to have more resources. The decreasing Wealth Elasticity values indicate that the magnitude of the relationship between local property wealth and revenue is decreasing.

Table 2

Equity Statistics for State and Local Education Revenues Per Pupil[59]

Equity Statistic	2003-04	2004-05
Coefficient of Variation	0.07	0.06
McLoone Index	0.96	0.96
Federal Range Ratio	0.26	0.25
Fiscal Neutrality Correlation Coefficient	0.59	0.50
Fiscal Neutrality Wealth Elasticity	0.12	0.09

[59] These analyses were conducted using the following revenues: state foundation revenues, URT revenues (25 Mills), local revenues beyond 25 mills, and other local revenues. State desegregation funds were not included in the analysis.

Education Trust Composite Score	-$187	-$116

Note: Desegregation funds are not included in the analysis of equity

Finally, the *Education Trust* measure is based on the premise that traditional school finance statistics do not adequately reflect a state's *equity* by simply comparing high and low spending districts without regard to district characteristics. Thus, the 2005 *Education Trust* equity measure was based on the spending gap between the lowest- and highest- poverty districts. The assumption underlying this measure is that a more "equitable" system targets more funding to districts with higher poverty rates. Specifically, *Education Trust* compared the average state and local revenues per student in the top 25 percent and bottom 25 percent of districts with regard to the percent of students living below the federal poverty line. We computed this same statistic (using NSLA percentage as our poverty measure) using the 2003-04 and 2004-05 Arkansas data. As Table 2 illustrates, Arkansas has become more equitable by this measure as the highest-poverty districts received $187 less per student (compared to the lowest-poverty districts) in 2003-04 and $116 less per student in 2004-05. Recall, these equity statistics are based only on local contribution and state foundation revenue, so categorical revenue is not included (when categorical revenues are included in this measure, we find that the higher poverty districts actually receive more revenue than do the lower poverty districts). The *Education Trust* figure echoes the same story as the previous measures: the Arkansas school finance system was more equitable in 2004-05 than in 2003-04.

In sum, the Arkansas school funding system became more equitable (according to traditional school finance measures of equity) as there is less overall dispersion of core educational revenues in the wake of the implementation of Act 59. Further, the fiscal neutrality and *Education Trust* equity statistics presented here indicate that school funding Arkansas is becoming more equitable because it is providing more resources to the high poverty districts, which is exactly what the state has intended to do.

Major Differences Across the Three States

Although all three states enacted new versions of a "foundation" program, the three state approaches differed significantly. Both Kentucky and Arkansas used a per pupil figure for the foundation program. But the Kentucky figure was defined as what had been spent and the costs of meeting prior state standards, while the Arkansas figure derived from a 2003 adequacy study that identified what adequate programmatic resources would be on a school by school basis.

But even though Arkansas and Wyoming began by estimating adequacy through a prototypical school approach, there are several differences between the Wyoming funding approach and the Arkansas funding approach:

- Wyoming retained the school based approach while Arkansas converted the school-based recommendations into a common foundation expenditure per pupil level
- Wyoming provides for much smaller class sizes – 16 in elementary schools and 21 in high schools

- Wyoming's funding model includes a more extensive set of educational strategies; compared to Arkansas, it funds extended day and summer school programs for struggling students, provides more for career and technical education, a more generous allocation for ELL students, additional pupil support resources based on school poverty concentration, $100 per pupil rather than $50 per pupil for the trainers aspect of professional development, a higher allocation for books and other instructional materials, assistant principals for the prototypical high school, a larger allocation for central office functions – administration, operation and maintenance, as well as full state funding for special education and transportation.
- Wyoming has several adjustments for small schools and districts while the Arkansas system has no special adjustment for small schools or districts.

Further, even though, the base spending level in Kentucky was supposed to be adequate, it provided two tiers of additional funding above that base. Although that approach made spending above the base fairer in terms of property wealth per pupil differences across districts, it seems curious that the state would provide such aid if the notion was that the tier I level was an "adequate" expenditure level. Kentucky is one of the few states that I know of that has provided state support for school districts that wish to spend above what the state has determined is an "adequate" level.

Finally, both Kentucky and Arkansas raised state taxes to fund their ambitious new reforms. But Wyoming, because its state general revenues derive largely from fees from oil, coal and gas extraction and are rapidly rising, was able to fund the reforms with no increase in taxes; indeed, the rising state revenues have allowed the state to operate an education system wherein local schools are not only receiving substantially increased dollars for current operating expenses but also nearly all schools in the state are being rebuilt or renovated, all paid with cash from the rising state revenues.

Changes in Revenues Per Pupil Over Time

As indicated above, all states have provided large increases in dollars through their adequacy oriented school finance reforms. Table 3 indicates revenues per pupil in average daily attendance over the past decade for the three states.

The numbers in Table 3 show that expenditures per pupil in each of the three states rose substantially from 1991 to 2005. Kentucky's largest funding increase came in the 1992 school year, when funding rose by about $800 per pupil from the previous year. It is still below the national average, however. The Arkansas figures show that while Arkansas expenditures per pupil were about 11 percent below Kentucky's in 1991, it was about 33 percent below that state in 2005. Because Table 3 uses national sources so the data can be compared across states, the figures for Arkansas for 2005 understate the actual increase; funding per pupil between 2004 and 2005 rose by over $1000 per pupil (Ritter & Barnett, 2006). Wyoming, which began with funding about 33 percent above Kentucky in 1991, saw funding rise substantially over this time period, jumping by about $600 per pupil in both the 1999 and 2000 school years, and will jump by an even larger amount – close to $2000 per pupil – for the 2006 school year. The Wyoming funding advantage over Kentucky dropped from 33 percent to just about 22 percent.

Table 3

Expenditures per Pupil in Fall Enrollment in Public Elementary & Secondary Education (Unadjusted Dollars)

School Year	Arkansas	Kentucky	Wyoming
1990-91*	3,461	3,897	5,310
1991-92***	4,031	4,719	5,812
1992-93***	4,124	4,872	5,822
1993-94***	4,280	5,107	5,899
1994-95*	4,186	4,545	5,753
1995-96*	4,401	4,807	5,826
1996-97*	4,535	5,155	5,971
1997-98*	4,708	5,213	6,218
1998-99*	4,956	5,637	6,842
1999-2000*	5,277	5,921	7,425
2000-01*	5,568	6,079	7,835
2001-02*	6,276	6,523	8,645
2002-03*	6,482	6,661	8,985
2003-04**	6,005	7,496	9,673
2004-05**	6,202	7,906	10,198

*Source: NCES, retrieved on August 16, 2006 at http://nces.ed.gov/programs/digest/d05/tables/dt05_166.asp
**Source: NEA, retrieved on August 17, 2006 at http://www.nea.org/edstats/images/05rankings-update.pdf
***Source: NCES Digest for Education Statistics 1997, Table 168 – *note*: calculated with average daily attendance instead of fall enrollment.

It is not clear what to make of these differences. Although the numbers are not adjusted for price differences across the states, it is clear that each state's definition of adequacy produced different dollar per pupil figures – actually, widely different dollar per pupil figures.

The commonality is that in all three states, funding rose by a substantial amount – at lest $1000 per pupil in today's dollars – after the adequacy court mandate, and seemed to continue rising in subsequent years. The question is whether these funding hikes, together with the programmatic initiatives discussed below, produced significantly higher levels of student academic achievement.

Uses of Resources at the Local Level

Although all three states provided large increases in revenues to its schools as a result of their new school finance adequacy structures, and although each state adopted a series of curriculum, testing, accountability and other instructional initiatives (discussed in next section), except for the mandate for multi-age classrooms in Kentucky – which was met with strong resistance by most local school districts and schools – the states made few requirements for how districts or schools should use the funds, except for Wyoming's providing the instructional coaches, extended day and summer school resources through categorical programs. Although the hope was that the new dollars, together with the curriculum and testing initiatives, would be

used effectively and efficiently to boost student performance, all states deferred to the "professionalism" of the local education community on how to use the dollars in ways that would increase student academic achievement. Kentucky went further than just trusting the local *district* leaders and required districts to give *schools*, together with newly elected *school-based councils* that had significant parent representation, substantial discretion over how all dollar resources would be used at the site level.

The assumption was that local and district teachers and administrators – those closest to the students and with the most detailed and intimate knowledge of student learning needs – would use the resources in ways that boosted student academic achievement.

The $64,000 question is whether this devolution of spending and program authority to local educators is the wisest policies states can use to ensure that the funds are used effectively and efficiently).

Kentucky**.** In addition to studying the equity impacts of Kentucky's school finance adequacy reforms (Adams & White, 1997), Adams (1994) also studied how school reform dollars were used at the local level several years after the reforms were first implemented. His studies were similar to those conducted by Picus in Texas (Picus & Hertert, 1993) and by Goertz in New Jersey (Firestone, Goertz, Nagle, & Smelkinson, 1994). Adams found that spending did increase in all districts, but also found that the allocation of spending across the major functions – administration, instruction, etc. – remained fairly constant, with just a small increase in spending for instruction. Although he found that districts and schools spent more for instructional materials, technology and professional development, and significantly raised teacher salaries – all objectives of the reform, he was not able to find more nuanced patterns about spending behaviors both because the standard categories used to report spending – administration, instruction, instruction and pupil support, etc. – were so broad that they provided little or no detail on exact spending by education program and strategy and because all reporting was at the district and not at the school level, so even more detailed reporting would have been averaged across all schools.

Picus and Goertz ran into similar difficulties with data based that were hard pressed to provide detailed information on use of funds at the local level after school finance reform. As a result, proposals were made for states to create more school-based fiscal reporting systems (Odden & Busch, 1997).

*A New Expenditure Reporting Framework**.** As a result of this inability to track resource use at the school level, Odden and colleagues (Odden, Archibald, Fermanich & Gross, 2003) developed a new expenditure reporting framework that would allow districts and schools to report the kind of detail that is desired on how dollars and related resources are used at the local school level, either before, during or after a reform. The main portion of the school expenditure structure consists of 10 elements that reflect the core components of nearly all school-wide educational strategies. The 10 expenditure elements are broadly categorized as instructional or non-instructional in nature.*

The 8 instructional elements are:

- *Core academic teachers*. Core academic teachers are the licensed classroom teachers primarily responsible for teaching a school's core academic subjects. Included are (a) teachers in self-contained regular education classrooms in elementary schools, (b) teachers of departmentalized core subjects such as English/language arts, mathematics, science, and social studies in secondary schools, and (c) special education or English-as-a-second-language (ESL)/bilingual teachers.
- *Specialist and elective teachers*. This expenditure element consists of licensed teachers who teach non-core academic classes and usually provide planning and preparation time for core academic teachers. Included are (a) specialist teachers, such as art, music, and physical education teachers, who usually provide regular classroom teachers with planning and preparation time; (b) teachers who provide instruction in a subject area that represents the special academic focus of a school (e.g., if a school offers a foreign language magnet program, the foreign language teachers would fall into this category); (c) career, technical, and vocational education teachers; and (d) driver education teachers.
- *Instructional coaches or facilitators*. These staff members are experts who provide the in-school and in-classroom coaching that help teachers embed new instructional strategies into their ongoing repertoire.
- *Extra help*. This category consists mainly of licensed teachers who employ a wide variety of strategies to assist struggling students, or students with special needs, to learn a school's regular curriculum. The educational strategies that these teachers deploy are generally supplemental to the instruction of the regular classroom. Included in this expenditure element are (a) tutors who are licensed teachers or trained aides and provide one-on-one help to students; (b) laboratories, generally in secondary schools, which generally provide extra help in reading and mathematics for students struggling to meet academic performance standards through additional classes; (c) resource rooms that provide small groups of students with extra help, usually remedial reading or mathematics that are not directly related to the school's regular curriculum or standards and that are typically paid for by compensatory bilingual and special education funds; (d) inclusion teachers who assist regular classroom teachers with mainstreamed students who have less severe physical or mental disabilities or learning problems; (e) ESL teachers who teach English to non-English-speaking students; (f) self-contained special education classrooms in which teachers and instructional aides work with severely disabled students for most or all of the school day, often teaching a modified version of the school's curriculum or working on other learning goals required by their students' individualized education programs; (g) extended day and/or summer school programs that provide students with extra instructional time to meet the standards in the regular curriculum; and (h) alternative programs that serve students who have trouble learning in traditional classrooms and that are often administratively and instructionally separate from the host school although they may be located in the school building or reported as part of the school's operating budget.
- *Professional development*. This expenditure element includes spending on the professional development of a school's staff. The expenditures include the costs of teacher time for professional development; trainers and coaches; professional development administration; materials, equipment, and facilities; travel and transportation; and tuition and conference fees (for more information on the details of the

expenditure elements of professional development, see Table 1 in Appendix A and Odden, Archibald, Fermanich, and Gallagher, 2002).

- *Other non-classroom instructional staff*. These include licensed and non-licensed staff who support a school's instructional program, such as program coordinators (e.g., curriculum or technology coordinators), library or media specialists, substitutes, and instructional aides other than those working in self-contained special education classrooms.
- *Instructional materials and equipment*. This category includes books, instructional supplies, materials, equipment, and computer hardware and software for all instructional programs, including regular education and all extra help programs.
- *Student support*. This consists of school-based student support staff such as counselors, nurses, social workers, psychologists, attendance monitors, or parent liaisons, as well as school expenditures for extra-curricular activities and athletics.

The 2 remaining non-instructional expenditure elements are:

- *Administration*. This expenditure element consists of all expenditures pertaining to the administration of a school, such as the principal, assistant principal(s), clerical staff, and administrative office supplies; and district-level administration, such as the superintendent, assistant superintendents, directors, and secretaries.
- *Operations and maintenance*. This expenditure element includes the costs of staff, supplies, and equipment for custodial services, food services, and security, as well as transportation, utilities, and building and grounds maintenance charged to a school.

Program resources collected at the school level include:

- *Special academic focus*. The academic program focus, if any, of a school (e.g., science and technology, college preparatory, the arts, or a comprehensive school reform or curriculum model like Success for All).
- *Length of instructional day*. The number of hours per day that students are present for instruction.
- *Length of class periods*. The typical length of class periods in minutes, a benchmark of how much time is available for instruction in each subject.
- *Length of reading and mathematics class periods (elementary schools)*. The length of math and reading class periods in minutes, including periods when students are specially grouped for extended math or literacy instruction.
- *Reading and mathematics class size (elementary schools)*. The average number of students per teacher in mathematics and reading classes (some educational strategies reduce class sizes solely for reading or mathematics).
- *Regular class size (elementary schools)*. The size of the regular education, self-contained, classroom, which may differ from the size of (a) mathematics and reading classes, if the school organizes those subjects differently, and (b) "specials" classes, such as art, music, and physical education.
- *Length of core class periods (secondary schools)*. The length of math, English/language arts, science, and social studies class periods in minutes.

- *Core class size (secondary schools)*. The average number of students per teacher in mathematics, English/language arts, science, and social studies classes. This can be compared to non-core class sizes.
- *Non-core class size (secondary schools)*. The average number of students per teacher in classes other than mathematics, English/language arts, science, and social studies.
- *Library or media center programs.* Whether a program is present, the accessible hours, and the information technology available.
- *Extra help strategies*. Incidence and type of programs (e.g., tutoring) designed to help struggling students become proficient in core subjects.

These program resource indicators provide an array of information—rarely known—about how dollars, resources, and time are used at the school level. And because our model links students to teachers and teachers to schools, we will also be able to talk in more detail than ever before about resources at the teacher and student level.

Human resource indicators include

- *Percent core teachers*. For elementary schools, this is the percentage of all licensed school staff, except the principal and assistant principal(s), who are regular classroom teachers. For secondary schools, this is the percentage of all licensed staff, except the principal and assistant principal(s), who are mathematics, English/language arts, science, and social studies teachers. This percentage provides a measure of core academic teachers to all licensed staff in the school.

And other human resources indicators that could be collected could include:

- *Teacher turnover or retention rate*. The percentage of teachers that leave (or are retained) each year. Using with teacher records, percentages by content area and experience level can be obtained as well.
- *Percentage of classrooms taught by first-year teachers*. Using with teacher records, percentages for core content areas can be obtained as well.
- *Principal experience, professional development, and assignment history*. This would add records of school and other administrative assignments since hire, and a transcript of professional development activities to the usual degree and years experience indicators.
- *Principal instructional leadership*. This is the degree of direction and emphasis on instruction provided by the principal.
- *Induction, mentoring, or similar programs for new teachers*. This would include whether a program was available at the school, the number of hours devoted to the activity by the new teacher and others, and the type of activity (e.g., assignment to full-time mentor, "buddying up" with an experienced teacher).

This framework has been used in several recent studies to identify more specific resource use patterns at the school level (Odden et al., 2006).

Use of the framework in Arkansas. Most recently, the expenditure framework was used to analyze how a random sample of 107 schools in Arkansas used resources after implementation of the Arkansas adequacy oriented school funding system in 2004-05. In part because the

legislature was sued immediately after they raised taxes and substantially increased school resources and in part because the legislature wanted to know exactly – program by program and strategy by strategy – how the dollars were used at the school level, the legislature commissioned a study to help answer these questions. A team of researchers organized by Lawrence O. Picus and Associates conducted the study in the spring semester of 2006.

First the team analyzed gross expenditures by the traditional education functions, as shown in the chart below (Ritter & Barnett, 2006). The major finding is that the allocation of resources across the traditional educational functions did not change between the 2003-04 school year, the year before the infusion of adequacy funds, and the 2004-05 school year, the first year after the reform. The troubling aspect of this finding is that the vast bulk of the new resources that were included in the funding model were almost exclusively for the instructional category. What these overall findings show is that despite the state's providing substantial new resources for instruction, at the local level, all functions received increased funding and that the instructional function was not advantaged fiscally as was the intent of the funding model.

Expenditure Type	**Per Pupil, 2003-04**	**% of Overall Budget, 2003-04**	**Per Pupil, 2004-05**	**% of Overall Budget, 2004-05**
Instruction	$4,093	61%	$4,604	61%
Instructional Support	$316	5%	$395	5%
Pupil Support	$293	4%	$325	4%
Site Administration	$374	6%	$413	6%
Central Administration	$288	4%	$304	4%
Maintenance & Operations	$619	9%	$676	9%
Transportation	$242	4%	$271	4%
Food & Other	$447	7%	$499	7%
Total Current Expenditures	$6,672	100%	$7,489	100%

The team then studied resource use by educational strategy in a random sample of 107 schools. The analyses required a review of both district and school budgets, and interviews of key leaders at the district and school level in order to determine resource use by educational strategy at the school level, using the above framework. The following are some of the highlights of the report's findings. The highlights focus on class size, which is the largest determinant of education expenditures, the use of instructional coaches that are deemed to be the key that makes professional development work (Joyce & Showers, 2002) and the use of tutors which is the most effective intervention strategy for keeping struggling students "on track" in their academic learning; all of these elements, as noted above, are fully funded in the Arkansas funding model.

Instructional time. The study collected data on use of instructional time during the school day. The average instructional day was 6 hours and 13 minutes, and the average length of academic classes were as follows:

- Mathematics: 64 minutes
- Reading (Elementary): 1 hour, 51 minutes
- English/Language Arts (Middle/High): 62 minutes
- Social Studies & Science (Middle/High): 54 minutes each

The surprising, and for the legislature, welcome finding from these results was the extended time allocation for elementary reading – nearly two hours each day. Since improving student performance in reading was a goal, this reflected a priority use of valued resource: time.

Class sizes. As the following shows, Arkansas schools used their resources to provide somewhat lower elementary class sizes than the model funded, about the same class sizes in middle schools, and larger class sizes in high schools. The differences from the model were not major, but the issue, from the legislative perspective, was whether the additional resources needed to reduce class sizes from the state standards, which require relatively small class sizes in the first place, would produce commensurate student achievement gains.

	State Funding Model	**Actual**
Elementary	23	Range: 13-24 Average: 20
Middle	25	Range: 11-35 Average: 25
High	25	Range: 10-41 Average: 29

Specialist teachers. Another interest for legislators – and educators as well – was the allocation of teaching positions between core teachers, i.e., teachers for core academic subjects (regular elementary teachers and mathematics, science, social studies, language arts and foreign language teachers in secondary schools) and specialist teachers (art, music, physical education, vocational education, etc.). The Arkansas funding model assumed a six period day with teachers providing instruction for 5 periods and having one period for planning, preparation and collaborative work on curriculum and instruction. This meant that after using the model's class size ratios to calculate core teachers, the model provided an additional 20 percent teacher positions for specialist teachers, thus providing the one period for planning and preparation. In the schools studied, the 20 percent addition would have provided an additional 399 teacher positions; the schools actually used their resources to hire more than twice as many specialist teachers – 815. This means that there are fewer resources proportionately devoted to core academic instruction, and many more for non-academic instruction. Again, since the prime state goals were student achievement in the core academic subjects, this local use of dollars seemed to be off kilter with an allocation that would have emphasized core subjects more.

School administration. The Arkansas funding model provided resources for one school administrator (principals and assistant principals) for every 500 students. In the schools studied, this would have provided about 100 school administrator positions. Schools actually had 167

site administrators, 67 percent more than the model funded. This issue here, of course, is that schools had more administration than the funding model provided, raising the issue of whether this was the most effective and efficient use of dollars, again given that the prime goal was to improve student achievement in the core academic subjects. It could be argued that the model under funded school administration, but the findings showed that funding was taken from someplace to add more administrators to the school.

Instructional coaches. One of the important, new resources provided in the Arkansas funding model was instructional coaches or instructional facilitators. These are the individuals who make professional development work – lead to instructional change that boosts student learning. Instructional facilitators provide the ongoing coaches to teachers to help them change their instructional practices in their own classrooms. For the schools studied, the model provided resources for a total of 241 instructional coach positions. The study found that only 49 such individuals in the schools. The lack of such individuals raises two issues – whether the schools and districts have mounted new professional development programs, and if they have, whether the lack of school-based instructional coaches will mean that, like too much professional development, the programs will not change classroom practice so will not impact student learning.

Instructional aides. The funding model provided no resources for instructional aides, on the basis of a range of research that found that the *typical* instructional aide does not add value in terms of student learning gains. In the schools studied, however, there were 389 instructional aides. Again, the issue is whether this local use of dollars is an effective strategy.

Teacher tutors. Finally, the Arkansas funding model provided substantial resources for struggling students, with the report suggesting that the most powerful intervention strategy for struggling students was individual or small group tutoring. The model provided 1 tutor position for every 100 students eligible for free and reduced price lunch for districts with a student poverty concentration below 70 percent, two positions for poverty concentrations from 70 to 90 percent, and 3 positions for poverty concentrations above 90 percent. Unfortunately, the state did not require districts or schools to spend these resources on tutors; they allowed local educators to use the resources for just about any strategy they thought would be helpful for struggling students including overall teacher salary increases. The study found that although the funding model provided resources for the schools to have hired 555 tutors, schools actually had only 34 such individuals, thus showing that one of the most powerful extra help strategies for struggling students was generally not deployed at the local level.

High school classes. The study also collected data on the types of classes offered in high schools. The results showed that of all classes offered, only 47 percent – less than half – were for the core academic subjects of mathematics, science, language arts, social studies and world language. In addition, vocational/technical classes comprised 16 percent of all classes, more than any other subject, including all core academic subjects. Finally, in the high schools that were part of the sample, fully 2000 of the total of 15,561 high schools students took a sport practice – football, basketball, etc. – in addition to physical education as part of their daily course schedule. If the prime goal is for students to perform better in the core academic subjects, this

allocation of courses offered and courses taken probably does not represent the most effective or efficient set of practices.

Summary. The above provides only some of the highlights of the study's finding about how resources actually were used at the local school level. What the study found was that without constraints placed by the states, relative to the funding model, local educators spent more of their resources on school administration, on lower elementary class sizes, on teachers who provided instruction in non-core academic subjects, on instructional aides, and on vocational education, physical education and sports practice in the high schools. Schools spent much less than the model provided on teacher tutors, which research shows is one of the most effective extra help strategies for struggling students, and on instructional coaches, which is the aspect of professional development that makes it effective, i.e., enables teachers to actually change their classroom instructional practice in ways that lead to higher levels of student academic achievement.

Although these general findings are not surprising – that local educators use resources differently than a state funding model when there is no requirement that they use the resources as the model provides – the question is whether actual local use was the most effective way to use the resources. Our conclusion is that spending more on school administration, non-core academic subjects and instructional aides and much less on teacher tutors and instructional coaches is not the most effective or efficient way to use education dollars. To be sure, others may disagree with this conclusion. But the point of the study's findings is that Arkansas now has good information about how its dollars – both the old dollars and the new adequacy dollars – are used by educational strategy at the local school level, which enables a substantive discussion about effective resource use. Without these data, neither the legislature nor anyone else would really know how resources were used so would have difficulty engaging in substantive debate about effective resource use.

Wyoming. As part of the enactment of Wyoming's 2006 school finance adequacy recalibration recommendations, the legislature allocated funds to mount a study over the next two years of resource use by educational strategy at the school level for all districts and all schools in the state. Lawrence O. Picus and Associates will be conducting this study, in cooperation with the University of Wyoming, using advanced doctoral students in educational administration to conduct some of the case studies. The study focus will be two-fold: a description of the educational improvement strategy at each school and districts and an analysis of the resource use at the local level, such as was done in Arkansas, using the expenditure reporting framework described above.

Final Conclusions on Local Use of Resources

Three major conclusions can be drawn from what is known about resource use at the local level after a school finance adequacy reform (or even without one). First, the current and typical expenditure reporting systems, such as those used in Kentucky, simply do not provide sufficient detail to answer the kinds of questions about resource use at the local level that need to

be answered. Although knowing how resources are allocated across the typical educational functions is important, such as the findings in Kentucky and Arkansas, the educational functional categories are simply too gross to provide the micro-data on how resources are actually used inside schools. The major issues about resource use, and the effectiveness of resource use, concerns resource use within the instructional function (Odden & Picus, 2004). Indeed, in the Arkansas case, expenditures for elective teachers, instructional aides, instructional coaches and teacher tutors would all be coded as within instruction, yet current reporting categories would not identify these different uses.

Second, the system needs a framework for how better to report resource use. The framework developed by Odden and colleagues as a way to report resources use, both time, staff and dollars, provides the type of detailed information within the instructional function that would enable educators and policymakers to have substantive discussions about resource use and school effectiveness.

Third, only the state of Arkansas at this point knows in some detail what happens to education dollars at the local level, and how resources are used by educational strategy at the local level. And the results enable the state to engage in a real debate about whether local resource use represents effective and efficient practice. Even if there is no one right way to use resources, this micro-knowledge of resource use should help to sharpen the debate and focus the longer term discussion both about how best to improve schools and whether local resource use practices support this improvement strategy.

III. Related Curriculum, Program, Testing and Accountability Reforms

All three states enacted curriculum and other programmatic changes along with their significant funding changes. Kentucky enacted these changes simultaneously, but by the time the school finance adequacy mandates emerged in Arkansas and Wyoming, these states – like just about every other state in the country – already were designing and implementing their version of standards based education reform, which in broad outline followed the integrated and coherent curriculum, testing and programmatic changes Kentucky designed.

Kentucky

Kentucky was one of the first – if not the first – state to create a comprehensive set of curriculum standards and a related testing system, with consequences for schools, as part of its comprehensive education reform program, of which the new SEEK school finance structure, was just the funding and resourcing mechanism (see also, Adams, 1993).

The programmatic changes were called the Kentucky Education Reform Act (KERA) which was the substantive twin of the SEEK funding changes. KERA included curriculum reform, governance reform, and as discussed, funding reform. The curriculum reforms included:

- State curriculum frameworks which were tied directly to the state's new goals, outcomes and assessment strategies. Different from the other two states, however, the Kentucky frameworks were required to provide direction to local districts and schools, to identify teaching and assessment strategies, instructional materials, ideas on how to incorporate community resources into the education program, model teaching sites and alternative ways to using school time.
- Statewide textbook adoption.
- Expanded professional development for teachers focused on the new aspects of KERA such as the new curriculum frameworks, the performance-based testing program, technology, and multi-age classroom requirement in early elementary grades.
- A new Professional Education Standards board to set requirements for teacher training and licensing.
- A new statewide assessment program that had to be primarily performance-based, used to ensure school accountability for student achievement of state reform goals, could be used to make comparisons to other states and the nation, and similar to the national testing system, the National Assessment of Education Progress (NAEP).

Further, KERA also provide expanded preschool programs for at-risk and children with disabilities, before and after school and summer school programs for students needing extra time to achieve to required state standards, multi-age/ungraded classrooms in the early elementary grades, a five year plan to buy and use technologies, and integration of social and educational services through the creation of Family Resources and Youth Service Centers.

To determine student achievement in these curriculum standards, the state developed a new, performance-based student testing system in reading, writing and mathematics. Students were scored as novice, apprentice, proficient and distinguished. Tests were administered in

grades 4, 8 and 10, so the system tested cohorts of students at key grade levels in elementary, middle and high school.

The state also created a school-based accountability system, which provided bonuses when the school as a whole met or beat pre-set targets for improved student academic achievement on the tests. The goal was to have all schools teach all students to proficient achievement standards within 20 years. In 1992, a test was given that established each school's starting point. Each 2-year period, each school had to improve 10% of the distance to 100% at or above proficiency to qualify for the performance award. For example, if a school had 20% of its students at proficiency in 1991, they would need to increase that percentage by 8 percentage points (10% times 80% remaining) to a total of 28% to be eligible for the next biennium performance award. In the next biennium, their target would be 28 plus 8, or 36%. This strategy had the twin advantages of including both an absolute target of high performance and changes over time. Although there were both gains and declines in the scores over time, the overall trend was for fairly sizable increases in student performance. Teachers working in reward schools recognized that the performance goals were getting more and more difficult to achieve, but they still felt that the goals were attainable (Kelley, Heneman & Milanowski, 2000).

The formula Kentucky used to determine the percentage at proficiency was somewhat more complex, and allowed schools to score 100% of students at or above proficiency without actually fully doing so. Student performances were scored at four levels: novice, apprentice, proficient and distinguished. Schools were given credit for student performance at each level, as follows: zero for each student scoring at the novice level, 0.4 for each student scoring at the apprentice level, 1 point for each proficient student, and 1.4 points for each student scoring at the distinguished level. So depending on the mix of scores, the result could be 100% with some students still scoring at the apprentice level. The distinguished level was also considerably above the proficient level so represented a substantially higher level of performance.

Schools that consistently failed to meet the performance improvement targets were provided with “designated master educators,” who helped the school conduct a curriculum and instructional audit and develop a more powerful education improvement program. The designated educators had power to redeploy the school’s budget in order to fully resource the school’s new educational strategies embodied in its revised education improvement program.

In addition, the Kentucky program required:

- The state to appoint a chief state school officer rather than continue with the previously elected chief.
- Districts to devolve the major portion of the budget to schools which then, with newly elected school-based management councils, had considerable autonomy over how to spend those dollars.
- A new teacher salary structure, a provision which has never been implemented though a comprehensive proposal for a knowledge and skills-based salary structure was made early in the reform implementation (Mohrman, Mohrman & Odden, 1996).

In addition, KERA launched the state, and all of its citizens, on a joint effort to improve the schools. The business community, the public, the political community and a statewide group that included all them – the Prichard Committee – all began to work together to improve the schools, and to forge joint commitment to and responsibility for the success of those efforts.

Wyoming[60]

Wyoming also has created a set of curriculum and testing initiatives. First, the state developed content and performance standards in nine content areas related to the Education Basket. These areas, called the common core of knowledge and skills, include: Language arts/reading/writing, mathematics, science, social studies, fine and performing arts, foreign language, health, physical education, and career and vocational education. District and school curricula and courses are to cover all these standards.

Second, the state required all districts to have a K-12 testing system that can be used to assess student proficiency in these nine areas.

Third, the state developed minimum high school graduation standards that require 4 years of language arts, and three years each of mathematics, science and social studies.

Fourth, and related, each high school diploma requires an "endorsement" that indicates the student's performance in the nine content areas. An "advanced" endorsement is provided if the student demonstrates "advanced" performance in a majority of the nine common core of knowledge and skills areas, a "comprehensive" endorsement is provided if the student demonstrates "proficient" performance in a all of the nine common core of knowledge and skills areas, and a "general" endorsement is provided if the student demonstrates "proficient" performance in a majority of the nine common core of knowledge and skills areas. Student performance in these areas is to be included in the Body of Evidence that each district and high school is to create for each student.

In order to respond positively and adequately to these requirements, each district needs to ensure that:

1. Curriculum and courses of study at all levels cover the required core content and skills areas. It should be noted that Wyoming districts have had to meet this requirement for several years, even before the most recent high school graduation requirements that are linked to the Body of Evidence.
2. The K-12 testing and assessment system provides sufficient data to identify student performance in the content and skills areas.
3. Sufficient data are available for the Body of Evidence so the endorsement for the high school diploma can be determined.

The Comprehensive 2003 Wyoming Assessment Handbook identifies the requirements that districts must meet as well as several alternative options for meeting these requirements.

[60] The following is taken from Odden, Picus, et al. (2005).

The leaders of the curriculum and testing units in the Wyoming Department of Education, as well as other Wyoming education leaders, have concluded that the requirement that all high school students take four years of language arts, and three years each of mathematics, science and social studies provides adequate opportunity for those courses to cover all the standards in those four content areas and for those courses to have embedded assessments that could be used to determine student performance in those content areas. It is possible to cover all the fine and performing arts standards in one year-long class (with multiple formats); to cover all the standards in foreign language in, at the most, two years and that many districts covered those standards in one year; and that the health, physical education and career/vocational technical standards can also be covered in one year-long class each. Put another way, over the four years of a high school program, all the standards for high school graduation could be covered adequately in 18-19 high school year-long classes. To be sure, most students would want to take more classes, but this is what is needed to be minimally adequate.

This means that a high school schedule of six periods a day, which would have students taking 24 courses over a four year time period, would provide adequate opportunity for students to take a sufficient number of courses to cover all the core knowledge and skills areas. And, a student seeking to enroll at the University of Wyoming, or other top quality post secondary institutions, could take four years each of language arts, mathematics, science and social studies, plus four years of a foreign language, plus one year of health, PE, fine and performing arts, and career/vocational education during their high school career. Obviously, high schools that had seven or eight period days would also offer sufficient numbers of courses, 28 and 32 respectively, for students to meet the core proficiency standards. In other words, a six, seven or eight period high school schedule would be able to accommodate all the high school proficiency standards and course requirements now required by the state as well as the coursework commonly associated with admission to top colleges and universities across the nation.

Current and planned Wyoming Department of Education initiatives are designed to resolve local school districts' challenges in meeting their K-12 testing and high school Body of Evidence requirements in a cost effective and more valid and reliable manner. The state's plan is to create an on-line testing system that can be used at the local level for all state testing and assessment requirements, and our professional judgment is that this provides a cost effective and quality approach to this task. Further, the state will provide additional assessments that local districts can use to augment the above more formal assessments. Finally, the state plans to continue the collaborative professional development on assessment literacy to enhance the ability of local teachers and administrators to use assessment data to improve instructional practice. The system is designed as follows:

1. The new assessments for Wyoming Students, (PAWS) testing system, which is valid and reliable at the individual student level, provides results for reading, writing and mathematics in grades 3-8, and 11. In addition, a science test for grades 4, 8 and 11 will be available for the 2007-08 school year. The grade 11 proficiency requirements could be met by students taking part or all of the test components in grades 9 and 10, so they will have multiple opportunities to meet the proficiency requirements before the "last" administration of the test in April of their 11th year of school. The results

can be used both for the Body of Evidence and for determining proficiency in reading, writing and mathematics for grades 3-8.

2. The state is providing all districts with the Early Reading and Diagnostic Assessment (ERDA) for assessing student proficiency in reading and writing in grades K-2. The results from these assessments both inform teachers about student literacy and provide data for improving the reading instructional program.
3. The state is developing an "item bank" that can be used in an on-line testing system for districts to assess proficiency in the other five content areas: health, physical education, fine and performing arts, career/vocational technical and foreign language. These items will be available on the online system called WEdGate. The items for health and physical education have already been developed. Moreover, the Wyoming Education Gateway, (WEdGate) http://wyoming.edgate.org/index.php includes a student tracking system that will facilitate each district's tracking of the proficiency of each student in all the various testing areas. Finally, the state is developing an assessment for students with severe cognitive disabilities and English language learning needs.
4. The state also will provide to districts, free of charge, reading assessments for grades K-3, reading, mathematics and science assessments for grades 3-8, and writing assessments for grades 3-12. These assessments can be used locally for additional assessment purposes and represent essentially an assessment system in addition to those included in PAWS and WEdGate.

This means that the state of Wyoming already is providing, or intends to provide in the near future, the primary valid and reliable testing and assessments that are required for the K-12 testing system and the Body of Evidence.

In 2006, the state also created what it calls the "success curricula" for high school students seeking to attend the University of Wyoming on the newly created Hathaway scholarships. These curricula focus more on the core academic subjects and represents a rigorous college prep set of classes.

In sum, like most other states, Wyoming has adopted new curriculum and student performance standards, and a comprehensive new testing system. However, although it requires districts to assess student performance through a comprehensive "Body of Evidence," there are few if any significant consequences for the results of either the state assessments or the Body of Evidence.

Arkansas

Arkansas has implemented a "similar" set of curriculum and testing initiatives. Its comprehensive testing, assessment and accountability program, begun in 1999 includes:

- Curriculum standards in the core academic subjects that identify what students should know and be able to do by the end of each grade, and define the performance criteria for meets and exceeds standard. The state requires high schools to provide 38 semester units

of courses every academic year, so requires curriculum offerings far beyond just the core academic subjects of mathematics, science, reading/language arts/writing and history.

- An aligned set of state tests. New benchmark tests are given in literacy and mathematics in grades 3-8, with performance levels of advanced, proficient, basic and below basic. In addition the state also administers the Iowa Test of Basic Skills in reading and mathematics for students in grades K-2, and in reading, language arts, math, science, and social science in grades 3-9; the Iowa test scores can be used to provide national comparisons on a state by state basis. Further, the state participates in the NAEP testing system, which has comparable and rigorous requirements for proficient and advanced student performance. Last, the state administers several end-of-course examinations at the high school level; currently, tests are available in Algebra I, Geometry and Grade 11 Literacy and end-of-course exams are planned for several other core high school subjects.
- An accountability system that publishes test score results on a school by school basis, as well as the adequate yearly progress required by the federal No Child Left Behind Act.
- The accountability system also requires the longitudinal tracking of individual student progress over time, and reporting in the near future.
- Schools also will be reviewed every two years on a best financial management practices basis and will be given a score of 1-5 based on the test scores from the state's benchmark tests.
- An expanding state support for preschool services; the goal is to provide a comprehensive preschool program for every child from a family with an income at or below 200 percent of the federal family poverty rate, if the parent wants their child in such a program.
- A huge investment in bringing all school facilities up to standards. In 2004, all school facilities were reviewed, their conditions noted, and the state has launched a major program to build and renovate all buildings so they meet standards in the near future. In the short term, facilities designated as "in distress" will receive priority funding.
- A student health report and increased family and community involvement in the schools.

Summary

Though different in detail but similar in shape, form and scope, all three states developed new curriculum frameworks that identified the content that was to be taught to all students, created a set of aligned state tests that were designed to measure student performance in at least the core academic subjects of the frameworks, and a set of accountability mechanisms that at the minimum included reporting student achievement at each school. The states also sought to increase parent and community involvement and to expand preschool programs.

But though perhaps not so clear in the above descriptions, the Kentucky initiatives were more sweeping than in the other two states in part because it launched the *state* as a whole on a process of reinventing all aspects of the public education system. The other state adequacy mandates required more funding, often linked to new programmatic initiatives as discussed above, but Kentucky's set of initiatives changed how the education system was governed at both the state and local levels, explicitly addressed preschool for some students in addition to the typical K-12 focus, sought to integrate social services with the public education system, and at least had the requirement to change the ways teachers were paid, to make that compensation structure one that also would support the overall thrusts of the KERA and SEEK reforms. It

seemed, largely through the Prichard Committee and the ongoing attention of the governor and General Assembly, to bind the *state* together in an integrated push to improve the education system and dramatically raise student performance. Indeed, it was the first state in the country to have a state testing system with scores provided on the percentage of students scoring are proficient and advanced levels, something never done before.

IV. CHANGES IN STUDENT ACHIEVEMENT

Though each state has provided substantially more dollars to its public schools, and accompanied those dollars with a variety of curriculum, instructional, governance, testing and accountability changes, student achievement changes are quite mixed, with large improvements in some areas and at some grade levels in some states, and more modest changes elsewhere.

Kentucky

Tables 4 and 5 show Kentucky statewide achievement first on the National Assessment of Educational Progress (NAEP) and second on state tests for various subjects and grade levels from 1992 to 2005. The NAEP scores show what others have claimed – namely, that there has been substantial change in student achievement in Kentucky over that 13 year time period. For example, the percent of 4th graders scoring proficient or advanced rose from 13 in 1992 to 27 in 2005, more than doubling over this time period. A similar doubling occurred in 8th grade math scores. Moreover, the percent of students scoring below basic dropped dramatically as well, halving in the 4th grade.

Reading score changes were not as dramatic, but the percent of 4th graders scoring proficient or advanced increased from 22 percent in 1992 to 30 percent in 2005, though the 8th grade increases were not as impressive. There also were improvements in those percentages for 4th and 8th grade science.

In sum, the data show impressive NAEP score gains.

The state changed its testing system in 1999, having had a more performance-based testing system from 1991 to 1998. Nevertheless, somewhat paralleling the test score increases shown by the NAEP data, increases in state test scores also are quite impressive over the six years from 1999 to 2005. From 1999 to 2005, the total academic index score rose from 64.4 to 80.0 for grades 4-5, from 59.7 to 73.0 for grades 7-8, and from 59.5 to 72.4 for grades 10/11/12. These are large increases. The math score increases are most impressive for grades 4 and 5, and grades 7 and 8, while the reading score rises are quite decent for the high school. Looking across all the numbers, the data show consistent increases in nearly every subject over this six year time period, suggesting that the state's schools are boosting student academic achievement bit by bit every year, an impressive accomplishment, given that test scores in many states rise for the first few years and then plateau. Kentucky shows gains year over year, and when related to the NAEP scores during the 1990s above, these more recent gains come on top of gains made the previous decade.

It seems the Kentucky curriculum, instructional, program, governance and accountability changes were fairly successful in turning the new money into performance gains for students.

Table 4

NAEP Achievement Levels for Kentucky

Grade	Year	Below Basic	Basic	Proficient	Advanced
Grade 4 Math	1992	49	38	12	1
	1996	40	45	14	1
	2000	41	42	16	1
	2003	28	50	20	2
	2005	25	49	24	3
Grade 8 Math	1990	57	32	9	1
	1992	49	37	12	2
	1996	44	41	14	1
	2000	40	40	18	3
	2003	35	42	20	4
	2005	36	42	19	3
Grade 4 Reading	1992	42	35	19	3
	1994	44	31	20	6
	1998	38	33	23	6
	2002	36	35	23	6
	2003	36	34	24	7
	2005	35	34	23	7
Grade 8 Reading	1998	26	44	28	2
	2002	22	46	30	2
	2003	22	44	31	3
	2005	25	45	28	3
Grade 4 Science	2000	31	41	26	2
	2005	24	40	32	4
Grade 8 Science	1996	42	34	22	2
	2000	40	32	25	3
	2005	37	33	28	3
Grade 4 Writing	2002	14	58	25	2
Grade 8 Writing	1998	16	63	20	1
	2002	15	59	24	1

Table 5

Kentucky Core Content Test – Content Area Indexes
State Summary

Grades	Year	Reading	Math	Science	Social Studies	Arts & Human.	Practical Living/ Voc. Stud.	Total Writing	TOTAL ACADEMIC INDEX
04/05	1999	78.8842	57.7370	70.1555	66.3121	41.3031	69.7287	51.9626	64.4
	2000	79.9438	60.5295	72.9790	67.0451	43.9714	70.0181	54.2193	66.2
	2001	80.6947	63.9183	77.0291	68.4821	44.5600	72.0758	58.6735	68.8
	2002	81.8860	66.0938	77.3533	71.0911	49.2759	73.8081	62.1468	70.9
	2003	83.5907	67.7237	81.7952	74.2458	55.4810	77.4366	68.1467	74.2
	2004	86.8255	77.0729	87.5417	81.8189	58.2765	82.3729	72.2986	80.1
	2005	87.1245	74.4443	87.6231	79.3201	62.8209	84.8955	74.8487	80.0
07/08	1999	78.0574	56.9277	61.4530	60.8933	57.1696	66.4538	39.2408	59.7
	2000	78.3492	59.9059	62.3488	64.1017	62.5874	66.0651	41.1272	61.7
	2001	80.4838	62.3653	64.4494	67.2831	64.1463	67.8167	43.5123	64.0
	2002	81.3738	61.2926	67.4381	67.7492	64.2615	67.6282	46.3395	65.0
	2003	82.7745	65.7234	68.3734	70.3612	69.3875	70.0662	51.9376	68.1
	2004	85.1183	68.1476	74.5706	74.0844	69.8265	70.2429	54.9076	71.1
	2005	86.9759	71.0049	73.9687	73.4854	76.5136	74.2941	57.2794	73.0
10/11/12	1999	63.6036	56.0741	59.1235	62.3337	48.0611	71.4429	56.0823	59.5
	2000	67.6895	57.2291	60.5251	63.4642	51.3813	73.4555	55.2072	61.1
	2001	68.8478	60.6746	62.0568	64.7954	56.8286	73.5979	59.0270	63.4
	2002	67.7694	62.3366	64.5194	68.1713	62.5826	72.7549	60.1484	65.1
	2003	70.7127	64.3940	64.0016	67.3220	64.6541	75.6246	64.5514	66.9
	2004	73.8019	68.6128	68.2667	73.4546	72.3368	79.1856	65.1496	70.8
	2005	77.4608	66.3151	69.4285	78.0521	70.6616	79.1323	68.3105	72.4

Wyoming

The Wyoming test results, both NAEP scores and state test scores, as depicted in Tables 6 and 7, respectively, are much more mixed. First, there have been impressive gains in 4th grade mathematics, and the gains came right after the first infusion of school funding in 1997. The percent of 4th graders scoring at or above proficient in mathematics rose from 18 percent in 1996 to 42 percent in 2005, more than a two-fold increase. The percent scoring at the below basic level dropped by almost two-thirds over this same time period.

Eighth grade math scores were stagnant from 1990 to 1996, but then the percent scoring at or above proficient rose, from 22 percent in 1996 to 29 percent in 2005, while the percent scoring at the below basic level dropped by a third. While not as impressive as the 4th grade math score increases, there were improvements nevertheless.

Other than the improvements in student achievement in mathematics, achievement gains as measured by NAEP scores in the other subjects have not occurred. For example, there has been virtually no change in reading achievement at either the 4th or 8th grade levels. And although there are not as many years of data, the changes in science achievement at both grade 4 and 8 have been virtually nil, in grade 4 from 2000 to 2005 and in grade 8 from 1996 to 2005.

The changes in student achievement as reflected by state test scores are actually less impressive as those embedded in the NAEP scores. As Table 7 shows, math performance in grade 4 stayed about the same from 1999 to 2005, with 35 percent at or above proficiency in 1999 to 39 percent in 2005, a modest but small rise. A similarly small rise occurred for 8th grade math, with 30 percent scoring at or above proficient in 1999 and 38 percent in 2005. On the other hand, grade 11 math scores rose much faster, with 33 percent scoring at or above proficiency in 1999 and fully 51 percent scoring at those levels in 2005.

For reading, the results are about the same as the NAEP scores – virtually no change in reading achievement from 1999 to 2000 at either grade 4, grade 8 or grade 11, with 45 percent scoring at or above proficient in grade 4 reading, 39 percent in grade 8 and 52 percent in grade 11, suggesting that there is much more improvement to be made in reading.

Finally, writing scores have stayed about the same at all three grade levels.

So the story in Wyoming is that there has been improvement in mathematics student achievement in grades 4 and 8 since the school finance adequacy reforms began to be implemented in 1997 but little change in test scores in other areas, including reading, writing and science. Wyoming certainly needs more work to translate the significant improvements in funding that already have been provided, and which will increase by quantum amounts once again in 2006-07, into better instruction that boosts student academic achievement.

Table 6

NAEP Achievement Levels for Wyoming

Grade	Year	Below Basic	Basic	Proficient	Advanced
Grade 4 Math	1992	31	50	18	1
	1996	36	45	17	1
	2000	29	47	23	2
	2003	13	48	35	4
	2005	13	45	37	5
Grade 8 Math	1990	36	45	17	2
	1992	33	46	19	2
	1996	32	47	19	2
	2000	31	45	20	3
	2003	23	44	28	4
	2005	24	47	26	3
Grade 4 Reading	1992	29	38	27	5
	1994	32	36	26	6
	1998	36	34	23	6
	2002	32	37	26	6
	2003	31	35	26	7
	2005	29	36	27	7
Grade 8 Reading	1998	24	45	29	2
	2002	22	47	29	2
	2003	21	45	32	2
	2005	19	45	33	2
Grade 4 Science	2000	23	45	29	2
	2005	22	46	30	2
Grade 8 Science	1996	29	38	32	2
	2000	31	36	31	3
	2005	26	37	33	3
Grade 4 Writing	2002	15	63	22	1
Grade 8 Writing	1998	19	58	22	1
	2002	14	58	27	1

Table 7
WY Statewide Benchmarks Scores

		Reading				Writing				Mathematics			
Grade	Year	Advanced	Proficient	Partially Proficient	Novice	Advanced	Proficient	Partially Proficient	Novice	Advanced	Proficient	Partially Proficient	Novice
4	2005	15	32	35	18	8	30	38	24	9	30	35	26
	2004	15	32	35	18	7	33	39	21	10	29	35	26
	2003	14	30	38	18	7	30	39	24	8	29	34	29
	2002	14	30	36	20	8	35	38	19	7	26	35	31
	2001	13	32	37	18	9	36	38	17	7	26	36	30
	2000	11	27	39	23	9	26	38	26	5	22	35	37
	1999	10	34	39	17	6	35	42	17	6	29	37	28
8	2005	8	31	41	20	9	44	33	14	12	26	35	27
	2004	9	32	41	18	7	50	34	9	12	28	38	22
	2003	8	31	40	21	9	39	35	17	11	24	36	30
	2002	7	31	41	21	9	44	32	15	10	23	38	29
	2001	9	30	41	20	8	44	36	13	9	23	38	30
	2000	6	31	42	22	5	42	38	15	9	23	38	31
	1999	6	34	43	17	9	47	35	9	7	23	41	29
11	2005	17	35	31	17	13	47	26	13	18	31	34	17
	2004	14	36	32	18	9	50	29	12	15	29	37	19
	2003	12	35	34	20	13	49	27	11	13	30	37	19
	2002	13	34	33	20	10	48	27	14	14	27	39	20
	2001	13	37	32	18	10	48	31	11	12	28	40	20
	2000	9	35	39	18	6	46	36	12	9	28	41	22
	1999	7	41	37	15	9	51	29	11	9	24	40	26

Arkansas

Test score results for Arkansas' students are presented in Tables 8 and 9 for NAEP scores and state test scores, respectively. Because the Arkansas adequacy dollar infusions began only in the 2004-05 school year, these test score data are not easily linked to the funding increase reality. Nevertheless, the NAEP data do show changes over the past 13 years, but unfortunately there are state test score data only for the past two years. So the resource increase and performance linkage will need to be studied in future years.

The NAEP data show trends that are remarkably similar to those in Wyoming, even though the resource infusion in Arkansas occurred beginning in 2004. Student math performance on the NAEP test rose from only 9 percent scoring at proficient (with zero percent at advanced) in 1992 to 35 percent in 2005, an impressive four-fold increase. This was an impressive improvement, even though the starting baseline was very low. And the percent scoring below basic dropped from 53 percent in 1992 to 22 percent in 2005, more than halving. Math performance on the NAEP also improved in grade 8, rising from just 10 percent scoring at or above proficiency in 1990 to 22 percent in 2005 – more than doubling.

The NAEP results in reading are more modest. The percent of grade 4 students scoring at or above proficiency rose from 1992 to 2005, but only from 23 to 29 percent, and the rise for grade 8 students was from 23 to 26 percent. Science achievement in grades 4 and 8 changed little.

There are only two years of test score data for Arkansas state tests in Table 9, so it is not possible to comment about trends. One impressive aspect of the results is the change in the percentage of students scoring at the advance level in mathematics;, which from 2005 to 2006 rose from 23 to 33 % in grade 3, 17 to 25% in grade 4, 10 to 18 % in grade 5, 15 to 25 percent in grade 6, and 6 to 10 percent in grade 8. If these and the other changes in math scores between the two years portray a trend, the trend would be impressive indeed. There are similar increases in the percent of students scoring at the advanced levels in reading as well, from 17 to 24% for grade 3, 14 to 24 percent in grade 4, 6 to 15 percent in grade 5, and 17 to 22 percent in grade 6.

Performance on the high school end-of-course tests (Table 10) are impressive, with the percent scoring proficient or advanced rising from 2001 to 2006 from 20 to 54 percent in algebra (tripling), from 19 to 60 percent in geometry (again tripling), and from 22 to 45 percent in grade 11 literacy (a doubling). These are the kind of increases in the lower grades that could be hoped for.

The state would like the 2005-2006 changes to continue, and is concerned with the funding increase, use of dollars at the local level and test score connections. Though sued right after enacting the reform in 2004, the legislature now knows that the new dollars were not used to increase spending on instruction, nor for the high impact strategies that had been included in the funding model, such as instructional coaches as part of professional development or tutoring for struggling students. Since the state desires more improvements in student academic achievement, it is very likely they will track school improvement strategies over time, school uses of resources, and whether what happens locally actually boosts student learning. If not, the state will need to decide what new capacity building and leadership initiatives will be required.

Table 8
NAEP Achievement Levels for Arkansas

Grade	Year	Below Basic	Basic	Proficient	Advanced
Grade 4 Math	1992	53	37	9	0
	1996	46	41	13	1
	2000	45	41	13	1
	2003	29	45	24	2
	2005	22	44	30	4
Grade 8 Math	1990	56	35	9	1
	1992	56	34	9	1
	1996	48	39	12	2
	2000	51	35	12	1
	2003	42	39	16	2
	2005	36	42	19	3
Grade 4 Reading	1992	44	33	19	4
	1994	46	30	19	5
	1998	46	32	18	4
	2002	42	33	21	5
	2003	40	32	22	6
	2005	37	33	23	6
Grade 8 Reading	1998	32	45	22	1
	2002	28	45	26	2
	2003	30	43	25	2
	2005	31	43	24	2
Grade 4 Science	2000	38	39	22	2
	2005	36	40	23	1
Grade 8 Science	1996	45	32	21	1
	2000	47	31	21	1
	2005	44	33	22	2
Grade 4 Writing	2002	18	63	18	1
Grade 8 Writing	1998	23	63	13	0
	2002	21	60	18	0

Table 9
Arkansas Statewide Benchmarks Scores

		Mathematics				Literacy			
Grade	Year	Below Basic	Basic	Proficient	Advanced	Below Basic	Basic	Proficient	Advanced
3	2006	11%	22%	34%	33%	21%	22%	33%	24%
	2005	13%	29%	35%	23%	22%	28%	33%	17%
4	2006	17%	23%	35%	25%	11%	28%	37%	24%
	2005	24%	25%	33%	17%	14%	34%	37%	14%
5	2006	26%	23%	32%	18%	10%	34%	41%	15%
	2005	34%	25%	31%	10%	11%	42%	41%	6%
6	2006	17%	25%	32%	25%	9%	32%	37%	22%
	2005	25%	31%	28%	15%	9%	34%	40%	17%
7	2006	30%	20%	35%	15%	10%	36%	39%	14%
	2005	37%	20%	31%	12%	11%	39%	38%	12%
8	2006	38%	18%	34%	10%	10%	25%	48%	18%
	2005	48%	19%	27%	6%	13%	30%	45%	12%

Table 10

Arkansas Statewide End-of-Course Exams

		Mid-Year (January)				Spring (April/May)			
Subject	Year	Below Basic	Basic	Proficient	Advanced	Below Basic	Basic	Proficient	Advanced
Algebra I	2006	12%	37%	44%	8%	12%	24%	37%	28%
	2005	18%	34%	36%	11%	15%	25%	37%	23%
	2004	18%	50%	29%	3%	15%	32%	39%	14%
	2003	24%	46%	26%	4%	15%	41%	37%	7%
	2002	42%	49%	9%	1%	21%	42%	30%	7%
	2001	57%	40%	3%	0%	31%	48%	18%	2%
Geometry	2006	13%	36%	37%	14%	9%	31%	42%	18%
	2005	15%	41%	34%	9%	14%	31%	38%	17%
	2004	25%	49%	24%	2%	13%	39%	38%	10%
	2003	33%	45%	20%	2%	17%	43%	35%	4%
	2002	35%	46%	18%	1%	28%	41%	27%	5%
	2001	33%	50%	15%	1%	35%	47%	17%	2%
Grade 11 Literacy	2006					11%	44%	45%	0%
	2005					14%	40%	44%	1%
	2004					15%	40%	43%	2%
	2003					18%	40%	39%	2%
	2002					22%	41%	36%	1%

2001	**31%**	**47%**	**21%**	**1%**

Summary

The test score data for the three states show that Kentucky has made the most significant improvements in student academic achievement since the implementation of their school finance adequacy reforms. Scores in mathematics rose significantly at both the 4th and 8th grade levels on the NAEP. As impressively, scores on the new state testing system have continued to increase in all subjects and at all grades levels over the past six years. This is impressive because it represents continuous, long term improvements in producing boosts in student learning, a goal that has been difficult for most states. At the same time, the current NAEP scores show that only 30+ percent of students in the state are achieving at or above a proficient level; the goal is to have 80-90 percent of students achieving at these levels, so significantly more improvement is still needed.

In both Wyoming and Arkansas, although there were improvements in math scores in grades 4 and 8 they were not as impressive as those in Kentucky, and scores in other subjects have changed little. This is particularly problematic for Wyoming, because it implemented the first wave of its adequacy reforms in 1997 and the new dollars do not seem to have been turned into learning gains in any subject except for mathematics. Since the Arkansas reforms were implemented just in the 2004-05 school year, it is hard to discern trends, but the increases in students scoring at the advanced levels in both reading and math from 2005 to 2006 are impressive and hopefully portend a trend. The most impressive test score changes in Arkansas were those in the end-of-course examinations in algebra, geometry and grade 11 literacy. Scores on these tests more than doubled from 2001 to 2006; although these increases began before the adequacy reforms, they continued to rise after the infusion of adequacy resources.

Whatever the trends for improvement, the NAEP data, which have comparable standards for proficiency across these three states, show that these states are educating only about 30-35 percent of students to or above a proficiency standard. What is needed is much higher overall levels of student achievement. The goal should be to double these NAEP percentages to 60-70 percent over the next decade or so. That will require more work on instruction, probably more school restructuring, and using the dollars, which have been substantially increased in all three states, in the most effective ways. How to get the latter to happen is the $64,000 question not only for these states, but for other states as well.

V. LESSONS LEARNED: IMPLICATIONS FOR CALIFORNIA AND OTHER STATES

In this section, the paper attempts to identify issues across these three states that might have implications for California. Though the paper is relatively comprehensive in identifying the aspects of each state's school finance adequacy systems, including the related programmatic initiatives, it attempts to identify the major salient features so that some key issues across all three states can be highlighted.

State Courts Produced Action

Although all three states had addressed school finance over the years, it took a state Supreme Court mandate to have the legislature design and fund an adequate school finance system. Though a few states around the country – e.g., Maryland – might address school finance adequacy without a court mandate, it took strong court mandates to spur action in these states.

Court Decisions are Based on State Education Clauses

All three state supreme courts based their adequacy mandates on the state education clause AND gave modern meanings to education clauses requiring efficient, proper or sound basic education systems. Indeed, the exact wording of the state education clause seemed not to matter. Each court infused a 21st century meaning into the education clause that generally linked school funding adequacy to curriculum, instruction and accountability issues, and what it would take at the school and district levels – financially and often programmatically – to implement those educational issues.

More Than One Court Mandate Might Be Required

In two of the three states – Wyoming and Arkansas – it took at least two court decisions to have the state design, enact and *maintain* an adequate school finance system. Though the second case has just been filed in Kentucky, arguing that the structure is no longer adequate, several studies – some by plaintiffs and some sponsored by the state – have concluded that the system is no longer adequate, so it could very well be that if the legislature does not update the system soon, a court could find Kentucky out of compliance with today's definition of adequacy.

Further, a third case is still on appeal in Wyoming, and districts in Arkansas might be inclined to sue again if they do not approve of action the Arkansas legislature will take after the recalibration effort in summer of 2006

One conclusion is that state supreme courts, after initially issuing a school finance mandate, seem today not to shy away from staying involved in the longer term development of an adequate school finance system. And the time frame between each action seems to be shrinking; perhaps 15 years in Kentucky, 3-4 years in Wyoming, and less than one year in Arkansas.

That said, it should be noted that as far as this author can tell, district arguments about the need for more money, or that the system created was not fully adequate, tend not to be based on

shortcomings for them to fund robust and sweeping strategies for improving student performance. The arguments tend to be narrow. Teacher salaries aren't high enough. Sufficient funds were not provided for books, or the inflation factor was not sufficient to finance the increase in utility costs. Or if the new funding level boosts the state to the number one position in spending per pupil, it still needs more resources to make teacher salaries number one too. The point: there tends to be a disconnect between the ongoing claims made by districts that the systems still are not adequate and what districts need to "double student performance"; in fact, the latter issue hardly appears in plaintiff arguments.

Court Rulings Made Adequate Education a State Responsibility

At least two of the state Supreme Courts – Kentucky and Wyoming – made it explicit that it was the *state's* responsibility to provide adequate funding and to boost student learning. Though the state could decentralize administration and implementation, the court stated very explicitly that providing adequate resources and having them used effectively and efficiently to produce results were the responsibility of the state, irrespective of what local education leaders did or did not do.

State Action Boosted Funding Per Pupil

The new school finance systems substantially boosted state dollars per pupil. Though difficult to compare across states and years, I would estimate that the reforms boosted revenues per pupil by about $1000 in today's terms. And the 2006 changes in Wyoming will hike that state's education revenues per pupil by an additional $2000 a child. So the reforms placed substantial new state resources into their public education systems. In California with 6.2 million public school children, that $1000 more per pupil would translate into an additional $6.2 billion for public schools.

Both Current Operations and Facilities Were Addressed

In all three states, adequate funding included attention not only to current operating expenses but also to facilities. The courts required the state to provide adequate school buildings and each state responded positively, further adding to the costs of reform. Over the years, Kentucky has developed about 7 different facilities aid programs. Arkansas conducted an audit of each school and is in the process of implementing a multi-hundred million dollar effort to bring schools up to code including building brand new schools in many locations, and Wyoming is approximately half way through the same process.

Funding Boosts Required Increased State Tax Rates

Both Kentucky and Arkansas had to raise state tax rates in order to fund the increased state revenues. And the fact that Wyoming did not raise taxes has primarily to do with the unique way that state raises state revenues and the current rise in prices for all types of energy – coal, gas and oil. Without the rising fees from energy extraction, Wyoming probably would have had to raise taxes as well. Whether other states can fully fund an adequacy mandate without raising state tax rates is an unanswered question, but to answer that question the state could ask

whether it could increase per pupil funding by $1000 with general revenue surpluses. In California, with 6.2 million students, such a funding increase would require an additional $6.2 billion, and perhaps even more.

Adequate Funding Levels Are Increasingly Linked to Specific Programs and Strategies

At least with respect to these three states, there has been an evolution towards linking the adequate funding to specific delineations of programs, strategies and administration at the school and district levels. Though Kentucky developed a series of programmatic initiatives as part of the overall restructuring of the education system, the way it determined the adequate spending level – what the state and local districts had been spending plus the cost of unfunded mandates, was very different from the way Wyoming and Arkansas determined their new funding levels. Each of the latter two states had studies conducted that sought to identify what was needed at the school level to deliver the curriculum and instruction the state required, as well as the additional extra help strategies that would be needed to allow local educators to give every student an equal opportunity to learn to or above the state student proficiency standards. Although one could differ with the programmatic elements in either the Wyoming or Arkansas funding models, the point here is that they are much more detailed than they were in Kentucky, and formed the basis for the new funding.

Further, it seems that as the systems get recalibrated over time, the programmatic elements expand in scope. Wyoming's 2005 recalibration added resources to enable districts and schools to mount more ambitious professional development strategies, added extended day and summer school programs, and increased specialist and elective teachers. The same evolution could be occurring in the 2006 Arkansas recalibration.

Although one could argue with the specifics of the programmatic elements in either of these Wyoming or Arkansas' adequacy finance systems, I would argue that if the state goal is to dramatically improve student achievement – say to double performance over the next ten years – then it would be wise for the state to think carefully and seriously about what it would take at the district and school level to accomplish that goal, or to make significant progress towards that goal, and to have those strategies and initiatives drive both the funding system and the implementation of the state's standards based education reform program.

Although the programmatic specifics were not as detailed in Kentucky, that state did have a more coherent sense of what it would take as a statewide effort to dramatically improve student performance and the state's education system than either Wyoming or Arkansas. As noted above, Kentucky explicitly identified professional development as key to reform implementation and developed and disseminated models of effective professional development. The state identified effective math, reading and other curriculum materials. It created a school-based accountability system with real consequences – rewards and sanctions. When schools consistently did not improve performance, it deployed "distinguished educators" to help them turn around, and research showed those efforts were quite successful. And it mounted a statewide "campaign" for the state as a whole to band together to improve the schools and their students' performance. And as the NAEP and state testing data show, the state had considerable success – student performance did double, even though the beginning base line was quite low.

The other two states have not experienced this level of success in its students' test score improvements, and tend not to have the entire state working to improve the schools. Most efforts seem more focused on just getting more money. What I would argue for these latter two states is that what is needed is a similar statewide effort to have everyone in the state – educators, politicians, the public and business leaders – work together to improve the education system – not just get more money, and in the process to identify the programs, strategies, structures and systems that produced the desired effects. Though there were some state initiatives in these states, there was more deference to localism, which I conclude did not produce the desired quantum boosts in student achievement that the large funding hikes could have been used to produce.

Few Restrictions on Local Use of Dollars

None of the three states placed restrictions on how the local education leaders should use the new dollars, even though in both Wyoming and Arkansas the justification for the adequate resource levels derived from specific and fairly detailed programmatic strategies and educational interventions as described in Section 1. Even though each of the programmatic elements were hotly debated for it to be included in the funding system, such as specific class sizes, the provision of instructional coaches, substantial resources to help struggling students achieve to standards, etc., all three states were reluctant to "mandate" use of reform dollars. Wyoming and Arkansas provided the funds in a block grant, as did Kentucky. Although Arkansas provided the resources for struggling students as a categorical program, and although the level of funded was rationalized on the basis of 1-1 tutoring, the regulations accompanying that program said districts could use the funds for tutoring, extended day programs, summer school, pre-school, smaller class sizes (even though the funding model resourced relatively small class sizes) or overall teacher salary increases – pretty much anything, except capital construction! The state is now rethinking the strategy of deferring all decisions about resource use to local educators.

Schools Did Not Use Funds According to the Programmatic Categories Embedded in the New Systems

Research in Kentucky could not determine the detailed use of resources by educational strategy at the school level, because of the shortcomings of its fiscal accounting and reporting systems, which are similar to those in most states. But the allocation of expenditures by function stayed the same, meaning that the instructional function – where all teaching expenditures are coded – did not increase disproportionately to expenditures on any other function.

Research in Arkansas found the same distribution of spending by function in the year after the reform, even though most of the new programmatic resources were for more instructional uses. Moreover, research in Arkansas, using a new school-based expenditure reporting framework, was able to discern how resources were used by educational strategy at the school level. While the findings were consistent with intergovernmental grant theory – that unrestricted dollars would be used in very different ways by local districts and probably not aligned with any programmatic funding model – the study found that indeed schools did ***not*** spend the dollars in ways that the state formula was developed. Even though significant

increases in student achievement in the core academic subjects were the prime state goal, in comparison to the funding model, schools spent more on:

- School level administration
- Specialist teachers providing instruction in non-core subjects, and
- Instructional aides

and spent significantly less on elements of the model that research shows positively impacts instructional practice and student achievement such as instructional coaches and teacher tutors.

How Wyoming's schools use resource and how that resource use aligns with the instructional improvement strategy at the school are the subjects of a research project that will be conducted over the next two years, again because the state legislature is very interested in answers to these questions and current financial accounting and reporting systems do not provide the data needed to answer the questions.

Again, there might be more effect ways to use resources than the programs included in the Arkansas and Wyoming funding models, but the states need to decide if a continued deference to local decision making, which at least in Arkansas has different ideas about how to spend educational resources, gives them the student achievement gains they desire, or whether more state direction and collaborative statewide effort is needed to determine how best to use resources to dramatically improve student achievement.

Widely Varying Impact on Student Achievement

Though Kentucky has more than doubled student performance on the NAEP scores, a very significant accomplish, student achievement gains have not been as dramatic in either Arkansas or Wyoming. Though gains were made in grade 4 and 8 in mathematics in these two states, there were small or insignificant gains in reading and other subjects at these grade levels, except for the significant increases in scores for end-of-course examinations in Arkansas. The lack of student achievement gain in Wyoming is particularly problematic given the very large funding increases its adequacy reform produced, and which put Wyoming as the top state in spending per pupil. This fact might lead one to question the state's strong commitment to providing funds to local districts in a block grant and to suggest that more direction on use of new resources in ways that are more likely to boost student learning might be warranted. Although test scores in 2006 seem much higher than those in 2005 in Arkansas, several more years of data will be needed to determine whether this is a one year blip or a longer term trend.

Linking Funding, Curriculum Standards, and Education Programs to Student Achievement

The question that remains in these states – even Kentucky which still has substantial progress to make to get more of its students achieving to or above the NAEP proficiency standard – is what does it take in terms of instructional improvement and school restructuring strategies to double student performance, and can the districts and schools deploy their substantial resources towards such strategies?

My perspective is that the programs and strategies included in the Wyoming funding model, and proposed for the recalibrated Arkansas funding model, do include the requisite resources for the programmatic initiatives that we know will work. Indeed, in recent work in Washington State we identified several sets of schools and districts that had doubled performance. We found that the districts and schools:

> First set ambitious goals. All of the successful schools we studied set new versions of goals that were much higher than their previous goals. For some, the goal actually was to double student performance; for others it was to have 90 percent of their students, including their low income and minority students, achieving at or above the proficiency levels. In the past, such ambitious goals had been considered unattainable. But most of the schools we studied set these ambitious goals, and many achieved them.
>
> The second thing the schools did was engage in "data-based decision making." This is similar to the process used by many private sector companies engaged in continuous improvement efforts. The purpose is to review the performance of the organization, identify areas where performance does not meet expectations, change the way the organization does its work so the low performance areas improve, and implement a feedback loop for a continuous improvement process.
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> In the schools we studied, there were two aspects of data based decision making. The first was analysis of student scores on the state test, noting where student performance was unacceptable, and determining how to improve those broad areas of low performance. The second strategy used more detailed "formative assessments." These are assessments given to students to determine what they know and what they do not know about the specific concepts and ideas included in the curriculum being taught. With the formative assessment profiles for each student, the teacher is able to design instructional practices that not only cover the concept students are to learn, but can tailor the process to the learning status of every individual student in his or her class.
>
> The result is a much more efficient deployment of instructional practice. Teachers don't just teach lessons, but they teach lessons that cover the concept areas in the district content standards and state test, and are specifically tailored to the learning status of the students in their classroom. The result is more effective teaching and much higher levels of student learning – without any more time or money, just smarter approaches to deploying instruction
>
> The third step the successful schools took to dramatically improve student learning was to revise the curriculum. The most successful schools in our study realized their old curriculum program was not up to the task, and after a review of research based programs, selected entirely new curriculum programs. Many of these new programs focused on problem solving and application – the new objectives for all core content areas. Moreover, they made sure that the new curriculum covered all the "holes" in their old curriculum that emerged in their "macro" analysis of their students' state test score performance. These successful schools and districts didn't do better by repeating

previously ineffective strategies; they employed different strategies, replacing the existing curriculum with new and better materials.

Fourth, the schools made more effective uses of instructional time during the regular school day and in doing so expanded the time for instruction in the core content areas. Most elementary schools:

- Created a 90 minute block to teach reading and writing every day

- Created at least a 60 minute block for mathematics and pledged that there would be no administrative interruptions of this mathematics time.

These strategies extended the time used for instruction for reading and math AND they were all done at no additional cost; they represent a way to reorganize the school's use of one of its most important instructional resource – time. The result was a much more effective and efficient use of the six hours of instruction available in the average school day. In addition, many of the schools went even further in reorganizing the way the school provided instruction, focusing on research based strategies that have been shown to be more effective with students. These schools created:

- "Double" reading and math periods for some struggling students so they would get a double dose of reading or math instruction during the normal school day.

- Multi-age classrooms and ability grouping especially at the elementary level. A process that allows the teacher to provide more customized instruction and thus extends instructional time. With formative testing occurring during the year, the composition of the groups changed periodically so this was not a tracking system but it was a more efficient way to provide more tailored instruction.

- Block schedules in secondary schools that allowed teachers to have students for 90 minute periods that provided the additional time needed to have students engage in critical thinking and problem solving, and application levels.

- Small classes of 15 for the 90 minute reading period by having everyone in the school teach reading during this time – all core teachers, art, music and PE teachers, the librarian, etc. The result was a no cost way to have small class sizes for the most important subject – reading. Students needing the most help received instruction from reading specialists during this time.

In addition, and usually through the reallocation of resources, they provided even more additional time for some struggling students by giving them:

- One-to-one, one-to-three, one-to-five, or other small group tutoring. In a few instances the tutoring was provided by a licensed teacher although in most cases the tutoring was provided by trained and supervised paraprofessionals.

- Before or after school tutoring.

- Summer school programs.

All of these extended learning opportunities are recommendations contained in the Evidence-Based model and the funding models for Wyoming and Arkansas.

Finally, the successful schools bolstered these multiple initiatives by vastly expanding professional development for teachers to insure that they had the skills needed to implement all of the above strategies with greater expertise and thus greater effectiveness. The schools provided more days of training, either by paying teachers for training during the summer, or by hiring substitutes to release the teachers for training during the regular school year. They had teachers use time during their regular "planning and preparation" periods for "collaborative work" with other teachers. Often this time included micro-formative assessment and data based decision making. In some cases the districts used even more ambitious resource reallocation strategies to place full time instructional coaches in schools – primarily reading and math coaches. This resource is needed to insure that the training provided to each teacher actually results in changes in their classroom practice.

The successful schools all implemented multiple strategies that increased the efficiency and effectiveness of their operations, their use of time, and the use of the dollars that were available to them. In summary, they:

- Set more ambitious goals and sought to produce more student achievement than previously thought possible.

- Engaged in "macro" and "micro" data based decision-making, using both state test and local formative assessment results to tailor their instruction to the learning levels and needs of each individual student in their classrooms.

- Adopted new curriculum programs that covered all the core concepts in the state standards and the state tests, and included strategies for teaching students higher order thinking skills, problem solving and application levels.

- Made better use of time during the regular school day by increasing the minutes of instruction in reading, writing and mathematics.

- Made even more effective use of that time by reorganizing the ways instruction was provided in multi-age classrooms and through block schedules; both are strategies that research shows produce higher levels of student learning.

- Provided more extended learning opportunities through tutoring, extended day and summer school programs, which were funded through resource reallocation.

- Created a more highly trained corps of teachers through vast expansion of professional development, and by reallocating resources to pay teachers for engaging in training. In addition the districts provided instructional coaches in schools to help teachers embed the new practices into their ongoing repertoire.

One important finding from this work is that the districts and schools we studied in states outside of Arkansas and Wyoming indicated they had exhausted their ability to reallocate resources to provide more of these costly but also highly effective strategies identified above, and were not able to use similar strategies beyond reading and/or math. Those resources are needed for science and social studies, and similar resources are needed in middle and high schools as well.

But those resources are included in the Wyoming and Arkansas funding models so all of their schools should be able to mount restructuring and improvement strategies that are as ambitious as the above schools, and would have the resources to do that for all four core academic subjects at the elementary, middle and high school levels.

Whether our most recent studies of how schools "double" performance is similar or different in Wyoming, Arkansas or California, future research and practice can only tell. But I would expect it will take something along the lines of the above school strategies. The challenge in those states is to scale up such improvement efforts so that all districts and schools are engaged in them.

The challenge in California will be similar – to identify a set of school and district strategies that are effective in dramatically boosting student achievement – doubling achievement in the next decade, then designing and funding a finance system that will provide the resources to districts and schools to deploy those strategies, and to develop leadership and other initiatives to scale up the efforts so they penetrate all districts and schools in the state.

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