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Weighted Student Formula:

Putting Funds Where They Count in Education Reform

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Introduction

Ever since the publication of *A Nation At Risk* in 1983, Americans have been preoccupied with two problems regarding public education: (1) student performance is unsatisfactory to most Americans despite large increases in real spending per student (Cooper, 1994, Hanushek, 2000); and despite several attempts at reforming curricula, teacher training, testing, and other elements of education (e.g. Ravitch, 2000); (2) the nation's schools see a large and persistent gap in scores on standardized tests between white and Asian students on the one hand and black and Hispanics on the other (Tyack and Cuban, 1995, 22-28).

Reform, however, has been hindered by a deep philosophical divide within the school reform community. On the one hand, the radical "market" reformers believe that public school districts are public monopolies unresponsive to the needs of their "customers" and incapable of change. Members of this group support vouchers, charters, tax credits, etc. On the other hand, the more moderate, "internal" reformers believe that public school districts simply need more support and better management. These advocates generally tend to favor decentralization, public school choice, lower class sizes, increased spending per pupil, etc.

In the past decade, market-oriented reforms have become much more prominent: (1) Milwaukee and Cleveland have implemented voucher programs for poor inner-city children, (2) 2,500 charter schools have been opened in 38 different states, (3) Arizona

offers a \$500 tax credit to parents who send their children to private schools, (4) a small group of districts has hired private companies like Edison Schools to run local schools, and (5) longstanding voucher programs in Vermont and Maine have attracted new attention.

However, the vast majority of children (over 85%) continues to be educated in traditional public schools within traditional public-school districts. These public school districts have implemented many “internal” reforms over the past decade, including: (1) site-based decision making (Los Angeles and Chicago), (2) class-size reduction (California and Texas), (3) more public school choice, (4) increased spending per-pupil (virtually all states), etc. Despite the massive scale of these reforms, student outcomes remain stagnant, especially in our largest urban districts.

Recently, moreover, a reform program has emerged that may well lead to some consensus between many members of *both* groups. This reform is Weighted Student Formula (WSF), a system of per-pupil budgeting that is now used in three large North American districts: Edmonton, Seattle, and Houston. In a WSF system, dollars are allocated to each student, and these funds follow the student to the local school. Children with greater needs—be they poor or disabled or non-English speaking—receive a higher allocation, giving schools the ability to provide extra services to these needy students, knowing that the weighted funds will “follow” the student to the school and classroom. And local educators are then given much discretion to determine how best to meet the educational needs of their student population.

By distributing dollars via a Weighted Student Formula, these districts have taken a radical step away from the predominant form of resource allocation used in almost all

large districts in North America. For example, take the three largest school districts in North America: New York's Board of Education (NYBOE), the Los Angeles Unified School District (LAUSD), and the Chicago Public Schools (CPS). In each of these systems, the Central Office establishes strict enrollment formulas that dictate what resources a given school will have access to. We will refer to these systems as Enrollment Ratio Formula (ERF).

In the LAUSD, for example, a middle school will receive 1 teacher per 39.25 students, plus \$24 per student in money for school supplies. Ratios like these drive the allocation of almost every type of operating expenditure: administrator positions, counselor and nurse time, textbooks, etc. Similar ratio systems are used in Chicago and in New York's elementary schools. Such ERF systems severely limit the ability of local educators to target programs to the local student population. Schools in such a system have little budgetary discretion, and principals report that they have limited managerial control over their school.

History of WSF: First implemented in Edmonton by former Superintendent Mike Strembitsky in the late 1970's, WSF is meant to counter the oppressive effects of strict, centralized resource allocation ratios. In theory, principals are better-equipped to make decisions about the needs of their students than are central office bureaucrats: For example, a recently-constructed school—with few maintenance needs—might decide to redirect maintenance money toward textbooks. A school wishing to reduce class size might choose to forgo the hiring of an assistant principal in favor of adding an additional teacher to the staff. This approach is consistent with organizational theory suggesting

that decentralized organizations should outperform centralized organizations (Lawrence and Lorsch, 1967).

Thus, internal reformers may be drawn to WSF because—working within the current structure of public school districts—it liberates principals and teachers from oppressive management policies, freeing them to target educational programs to the local student population. Likewise, market reformers may support WSF because it creates a limited sort of “public market” (a kind of internal, public “voucher”) in which: (1) each student is allocated funding based on his or her needs, (2) dollars follow students all the way down to the school, and (3) local educators have incentives to improve the outcomes of their students. WSF looks even more like a market when it is combined with a strong form of public school choice.

The purpose of this paper is to:

1. Compare and contrast the WSF systems used in Edmonton, Seattle, and Houston.
2. Highlight how WSF is different from the resource allocation systems used in most urban districts, especially New York, Chicago, and Los Angeles.
3. Make recommendations about how a district can implement WSF successfully, based on the lessons from Edmonton, Seattle, and Houston.

I. Comparison of WSF Systems

A. General Comparison

Edmonton, having first implemented a pilot program in the late 1970's, has over 20 years of experience with WSF. In contrast, the Seattle and Houston programs are relatively new at this reform. Seattle's WSF was first implemented in 1997-98, initiated by Superintendent Joseph Olchefske when he was working as the district's CFO under the late Superintendent John Stanford. In Houston, former Superintendent Rod Paige—who went on to become US Secretary of Education—implemented the program in 2000-01.

Because two of the programs are less than five years old, it is not currently feasible to compare the long-term effects of implementing WSF in different cities. Does the implementation of WSF lead to long-term gains in test scores? How are class sizes affected? Is it inevitable that a greater and greater percentage of resources will be allocated via WSF, as a district gains experience with the system? These are questions that will remain unanswered for several years. However, it is possible at this time to compare the implementation of WSF policies. Because it is so new and so radical, there are no generally accepted practices for the implementation of WSF. The three districts in our study have implemented very different versions of WSF.

Given the variation in policies, we have defined a WSF district as one that meets all of the following conditions:

- Each student is assigned a monetary allocation that follows him/her to the school and becomes part of a school-site budget.
- Students with special needs carry extra allocations, based on a weighting system.
- A significant amount of the district's operating budget—over 30%—is distributed in this way.

- Schools are given significant managerial autonomy and budgetary discretion, *as perceived by principals.*

While a typical WSF system has these characteristics, districts vary in the percent of total resources allocated through the WSF, the nature of the weighting system, and the degree to which principals have budgetary control. Table 1 below shows that the three WSF districts are starting from very different points. Houston serves four times as many students as Seattle, and Seattle spends over three thousand dollars more per student. Please note that, throughout this report, Edmonton’s figures are listed in Canadian dollars. We have chosen to present Edmonton’s raw figures, rather than converting them into U.S. dollars.

Table 1: Enrollment, Total Operating Budget, and Operating Budget Per Pupil of Three Districts using Weighted Student Formula.

District	Total Pupil Enrollment (2000-01)	Total 2001-02 Operating Budget	Per pupil spending
Houston	208,672	\$1,160 million	\$5,558
Edmonton	80,862	\$466 million	\$5,709
Seattle	47,432	\$435 million	\$9,173

Scale of WSF programs. In theory, a district could choose to distribute almost 100% of its funds via the WSF. At the very least, a small percentage of the district budget would need to be allocated to district governance, administration, and state compliance. Therefore, for our purposes, let us assume that a district could realistically distribute 90-95% of its funds via the WSF. However, none of the pioneering districts in our study have taken this approach to this date. As Figure 1 shows, Edmonton distributes the greatest percentage of total district resources via its WSF: over 73%. Seattle and Houston each distribute less than 55% of the total district budget via WSF.

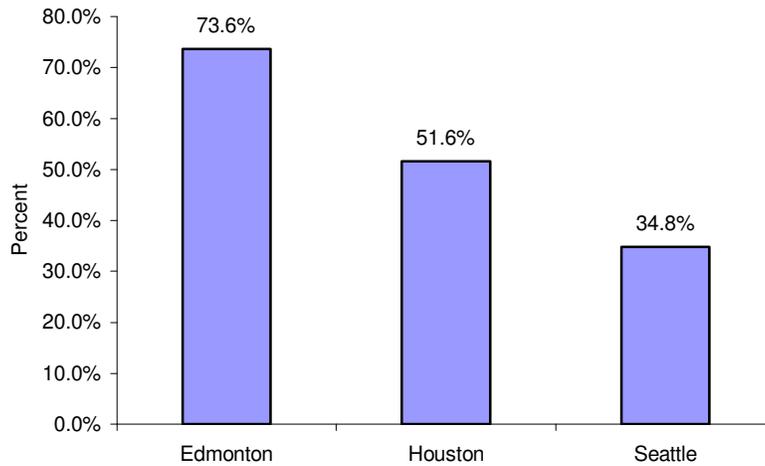


Figure 1. Percent of Total Operating Budget Distributed Through WSF, 2001-02.

Note: Houston has delayed implementation of WSF for Special Ed funds until 2002-03. With Special Ed funds, Houston will distribute 59% of its operating budget via WSF.

Edmonton is also further along on two other measures of scale: (1) amount of base allocation for a General Ed elementary student, and (2) amount per student distributed via WSF. Note in Table 2 that, for any given district, these two numbers are different because many students are “weighted” and receive more than the base allocation.

Table 2: Comparison of the Scale of Three WSF Systems.

District	Base allocation	WSF amount per student	Total amount distributed via WSF
1. Edmonton	\$3,712	\$4,240	\$342.8 million
2. Houston	\$2,506	\$2,866	\$598.1 million
3. Seattle	\$2,607	\$3,180	\$151.3 million

In 2003, Houston will distribute its Special Ed funds via the WSF. With Special Ed funds, they would have distributed a total of \$686 million via the WSF in 2001-02. Their WSF amount per student would have been \$3,288.

Budgetary discretion. Since WSF is meant to free principals and teachers from

excessive state and district regulations, we predict that WSF principals will perceive that they have more discretion over their school's budget. Our ethnographic data suggests that this is indeed the case. Over the past year, our team conducted interviews with over 200 principals in six districts. On average, principals in the WSF districts perceive that they have discretion over more than 50% of the school budget, while principals in New York and LA report only 5-7% discretion over their budgets. Astoundingly, principals in Edmonton report that they have over 90% discretion.

Thus, despite the failure of many decentralization programs, it appears that WSF is an effective way to empower local educators. At the very least, that is what principals perceive. However, even in districts using WSF, local educators do not have complete budgetary discretion. In all cases, principals and teachers must comply with State law (or, in Edmonton's case, laws of the province of Alberta). For example, in Houston, maximum class size for grades K-4 is set at 22:1 by Texas state law. In Edmonton, all province schools must devote 950 instructional hours every year to the Alberta curriculum.

In addition, WSF districts often establish basic guidelines for schools to follow. In Edmonton, schools must ask for a "waiver" if they want to establish classes with more than 30 students. Houston has formally adopted a policy in which district rules are abolished, requiring principals only to comply with State law. In practice, however, all three districts still exert authority over what happens in schools, since principals report directly to superintendents, who are responsible for hiring and firing decisions.

We believe that there are three main reasons that Edmonton principals perceive a greater level of school-site budgetary discretion. First, Edmonton has taken steps that

make it very easy for principals to make spending decisions. Most importantly, each school has a credit card with which school employees can make purchases, thereby avoiding the cumbersome red tape associated with a Purchase Order (PO). Schools can make purchases up to \$3000 per month without centrally-generated POs. In Houston and Seattle, principals must still go through the central office for all purchases.

Second, Edmonton schools have the authority to hire outside contractors instead of waiting for service from the district's Central Offices. For example, a school in Edmonton can hire a private-sector construction firm to complete a maintenance project, as long as a competitive bidding process is used to select the provider. In 2000-01, Edmonton schools spent over \$8.2 million—2% of their total budget—on external service providers. In Houston and Seattle, schools have less flexibility to go outside the district.

Finally—and most importantly—Edmonton principals have more financial flexibility because a greater portion of the district's budget is distributed via the WSF. In Houston and Seattle, a principal is forced to pay for all major components of the instructional program out of a per-pupil budget that is significantly less than the district's per-pupil operating budget. After paying teacher and administrator salaries, a school is left with a very small pot of discretionary funds.

In Edmonton, since a greater portion of the budget is decentralized, principals have a much larger pot of money “left over” after they have paid for the main instructional program. Contrasting Edmonton with Seattle, we see that principals in Seattle perceive that they have discretion over 79% of their school budgets. However, since only a small fraction of the district's funds are distributed via WSF, principals

control only 36% of the district's total funds. A similar calculation shows that Edmonton's principals have control over 83% of the district's budget.

For this reason, we believe that WSF systems will deliver the most benefits when a very high percentage of a district's budget is decentralized. It is perhaps unfair to ask principals to pay for the district's entire instructional program out of school-site budgets that include less than half of the district's total operating funds.

(Note: In a WSF district, the amount a school receives from the WSF formula will not equal its total discretionary budget. In all 3 districts, funds are distributed to schools in ways other than the WSF. For example, all Seattle schools receive the foundation allocation plus other supplemental funding, meaning that WSF dollars account for only 76% of the school-site discretionary budgets. Even in Edmonton, a variety of miscellaneous funding mechanisms persist, and approximately 80% of a school's discretionary budget comes from the WSF.)

Public school choice. The full benefits of a WSF system will occur when parents are free to choose the public school that their child will attend. This pairing of WSF and public school choice gives schools a powerful incentive to attract more students, since each student brings with them thousands of dollars in additional funds. In Edmonton, a policy of full public school choice is in place. Schools with fewer spaces than applicants can limit enrollment with a lottery system or first-come-first-serve policy. In addition, schools are allowed to give preferential treatment to siblings of current students and families who live within the "geographic encatchment" area.

Seattle also has a public school choice program, and 90% of children are assigned to their first- or second-choice school. Houston's program of school choice is more

limited. Students who wish to attend a school outside of their “attendance zone” are forced to apply for a “student transfer”. Interested students must qualify for one of the 8 transfer options that the HISD offers.

B. Weightings and Redistribution

Weighting systems. A fundamental component of any WSF system is weighting. If each child were allocated the same amount of money, schools serving a student population with special needs would not have the ability to provide extra services to these students. In effect, weighting systems are an attempt to “level the playing field” by giving each school the resources necessary to meet the needs of its students, no matter how needy.

In all three districts that we studied, the following students receive a higher allocation based on an assumption that they have special needs: (1) those whose first language is not English and (2) those designated as disabled. In addition, the following types of students receive additional resources from at least one (but not all) of the districts studied: (1) poor students, (2) gifted & talented students, and (3) students at a school with a very high annual mobility rate.

Table 3 below shows a detailed comparison of weightings across the 3 districts.

Table 3: Comparison of Weightings Used by 3 WSF Districts*

Type of student	Edmonton	Houston	Seattle
Limited English Proficient (LEP)	126%	110%	127%
Special Education—lowest weighting	199%	210%	195%
Special Education—highest weighting	546%	700%	876%
Disadvantaged (poor)	NA	120%	110%
High-mobility school	NA	120%	NA
Gifted & Talented	126%	112%	NA

*The numbers indicate the funding that such a student will receive, as a percent of the base funding for a General Ed student. For example, an LEP student in Edmonton will receive 126% of the base funding for a General Ed student.

As noted earlier, Houston did not distribute its Special Ed funds via the WSF in 2001-02. The Special Ed weights listed above are under review, and Houston will implement a revised program in 2002-03.

Redistribution. The weighting systems discussed above are, in effect, a method of redistributing education dollars to the neediest students. However, the districts we studied vary greatly in the degree to which they use WSF to redistribute resources. We used two measures to assess the relative emphasis on redistribution in these districts: (1) percent of WSF dollars that are devoted to redistribution, and (2) ratio of the highest possible student allocation to the lowest possible student allocation.

On each of these measures, the U.S. districts of Houston and Seattle are much more progressive than Edmonton. Figure 2 below shows that Seattle devotes 22.4% of its WSF dollars to redistribution, while Edmonton redistributes only 14.2%.

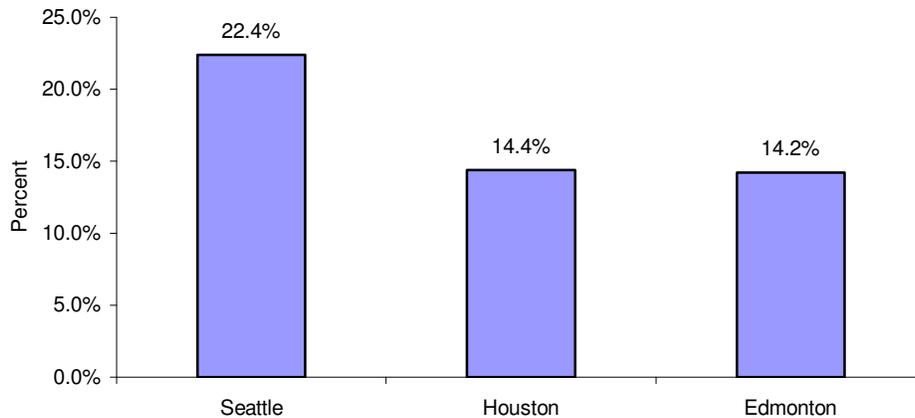


Figure 2. Percent of WSF funds devoted to redistribution, 2001-02. Note: Houston's percentage will jump to 31.2% next year, when Special Ed funds are included in the WSF.

Houston only redistributed 14.4% in 2001-02, but—if Special Ed dollars are included, as they will be next year—Houston will become the district with the greatest focus on redistribution: Over 31.2% of its WSF resources will be devoted to redistribution.

The second way of measuring relative emphasis on redistribution, as shown in Table 4, is to compare the highest-possible allocation for one student to the lowest-possible allocation for a student. On this measure too, Houston and Seattle are more progressive than Edmonton.

Table 4: Comparison of Highest-to-Lowest Student Allocations in 3 WSF Districts*

District	Ratio of Highest-to-Lowest Student Allocation
Seattle	10.26
Houston	7.50
Edmonton	5.72

*Houston data includes Special Ed weightings, which will not take effect until next year.

C. Other WSF Issues

Implementing a WSF system requires a district to confront a number of thorny issues, many of which have political implications. What follows is a discussion of six such issues and a description of how Edmonton, Houston, and Seattle have attempted to solve each of them.

Small schools. In the implementation of WSF, small schools will often end up with a significantly smaller budget. This is because Enrollment Ratio Formulas (ERFs) disproportionately allocate resources to small schools. (For a detailed discussion of why this is, please see page 19.) According to Ron Wilson, Budget Director of the HISD, the main practical effect of transitioning from ERF to WSF is that large elementary schools

have significantly larger budgets than before.

Figure 3 below depicts the increase or decrease in budget that each Houston school experienced after the implementation of WSF. On average, larger schools see a more positive budget impact than smaller schools:

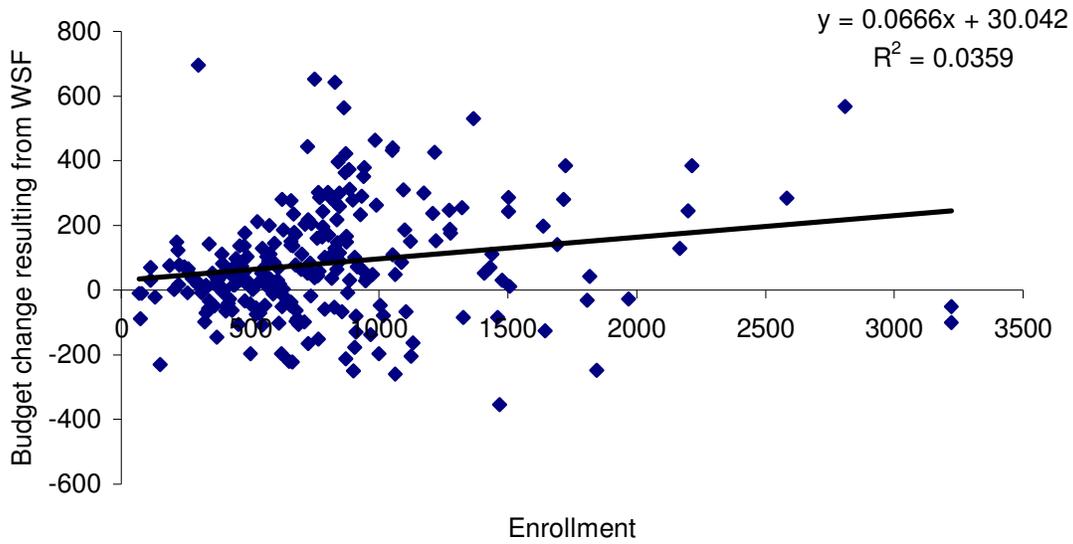


Figure 3: School size vs. Change in Budget Resulting from Implementation of WSF. On average, WSF results in a positive budget impact for larger schools.

As a result, all three districts have added mechanisms that protect smaller schools from the impact of WSF. In Seattle, each school is given a “foundation allocation” which is meant to cover the fixed costs of running each school. In addition, to ensure that small schools do not receive a disproportionate share of district resources, Seattle establishes a minimum school size, as shown in Table 4. Schools under the minimum are forced to increase enrollment or combine with another school.

Table 4: Seattle’s Foundation Allocation System*

School type	Minimum size	Foundation Allocation
Elementary	250	\$194,000
Middle	600	\$418,000
High School	1000	\$529,000

*Total amount distributed under the program is \$26 million.

In contrast, Edmonton has a special formula that gives small schools additional funds. In effect, an Edmonton school receives an additional \$460.88 for each student under a total enrollment of 300. The maximum amount a school can receive is \$138,265. Total amount distributed under this program is \$8 million. In Houston, a similar subsidy program provides up to \$300,000 to schools with enrollment under 400. In addition, according to officials at all three districts, many small schools are also protected from the effects of WSF through special, non-WSF allocations passed by the school board. In this way, small schools—including magnet schools—continue to receive a disproportionate share of district resources, though this is not reflected in the WSF.

From a standpoint of economic fairness, there is a strong argument against such “small-school subsidies.” Students in such schools are receiving a greater portion of the district’s resources, and equity becomes a major concern, since smaller schools are often located in wealthier areas that serve fewer minority students. School size involves a fundamental trade-off: Small schools have lower student-to-administrator ratios, resulting in more personal attention to students. However, large schools—with their economies of scale—can afford to provide specialized services that small schools cannot. By cross-subsidizing smaller schools, we distort the yin-and-yang of this trade-off, allowing small schools to “have their cake and eat it too”.

Phase-in. Implementation of WSF can have a huge effect on the size of an individual school's budget. In Houston, full implementation of WSF in the 2001-02 school year resulted in some schools having up to 67% more money than they would have had under the previous allocation system. Other schools lost up to 39% of their budget. Given the disruption of educational services that would result if such changes were made in one fell swoop, districts have devised several ways to phase in WSF systems:

Pilot programs. Edmonton's experience with WSF began with a pilot program of 7 schools in 1977-78. Only 4 years later, in 1980-81, was the program expanded to include all EPS schools. While Edmonton's pilot was successful, there are inherent dangers in implementing a WSF program through a pilot. In the early 1990's, the LAUSD attempted to implement a version of WSF in schools that joined the reform program LEARN. However, in an effort to make the pilot successful, schools were "held harmless" from any budget shortfalls that resulted from WSF. In effect, this was an abandonment of the principles of WSF, and the system never took hold.

Gradual phase-in of economic impact. Under Superintendent Rod Paige, Houston implemented WSF over a 2-year period, allowing the impact of WSF to reach schools only gradually. In 2000-01, schools only felt 30% of the financial impact of WSF, whether it was an increase or a decrease in budget. However, principals were aware that the following year—in 2001-02—they would feel the full impact of the system. This allowed principals time to prepare for the large financial changes that came in this school year.

Gradual increase in amount of resources distributed via WSF. Another way to introduce WSF over time is to gradually increase the portion of district resources that are distributed through the system. Presumably, Houston and Seattle will attempt to increase the percentage of their operating budgets that are distributed through the WSF. For example, in Seattle all of the following services are budgeted centrally: maintenance workers, custodians, speech therapists, etc. Presumably, as they grow more comfortable with budgetary discretion, schools will desire more and more resources be distributed to them via the WSF. When Edmonton instituted WSF in the late 1970's, money for custodial services was still centralized. By 1983-84, however, this pot of money had been decentralized via the WSF.

Funding for different grade levels. In Seattle, middle school students and high school students receive only 89% of the allocation given to a General Ed elementary student. In Houston, all General Ed students receive the same amount of funding, regardless of grade level. (For a detailed description of Edmonton's allocation methodology for high schools, please see Section D below.)

At this point, it is unclear how such funding differentials will affect schools and students. We are not aware of any quantitative evidence suggesting that any grade level "deserves" a higher allocation than another. While elementary schools often have smaller class sizes, high schools must provide specialized instruction, including science labs and art studios.

In fact, the U.S. has historically spent more per student on secondary education. According to the National Center for Education Statistics (NCES), average per pupil

spending on elementary students was \$5,961 in 1997, while \$7,462 was spent on the average middle/high-school student. Thus, secondary schools have historically been funded at up to 25% more than elementary students. These statistics suggest that all three WSF districts may be under-funding middle schools and high schools, at least when compared to other districts in the United States.

Enrollment vs. attendance. In many states (including California), education dollars are distributed to districts on the basis of Average Daily Attendance (ADA), rather than enrollment. Districts therefore have an incentive to keep students in school: Increases in attendance lead directly to increases in funding. However, this can also harm schools that serve a disadvantaged student population, since these students typically have lower rates of attendance but still require a portion of administrative and instructional resources. WSF systems confront a similar trade-off.

Two of the districts we studied have attempted to solve this problem by instituting a hybrid system that considers both attendance and enrollment. In Houston, schools receive funding based on attendance, plus 75% of full funding for the difference between full enrollment and average attendance. In effect, this system gives high-truancy schools a financial boost, while retaining the incentive for them to improve attendance rates.

In Edmonton, elementary and middle schools are funded based on enrollment, but high schools have a more complicated formula that takes into account course completion. A high school receives a given student's allocation only if the student achieves 50% attendance and a 25% score in the course. (50% is a passing grade.) The school is required to document each student's participation, and the province of Alberta

periodically audits student records.

Edmonton funds each school at a level slightly higher than their projected completion rate. If the school meets its completion target, then they get to keep the extra allocation from the district. This policy is meant to ensure that schools do not neglect at-risk students who might be less likely to complete a course.

Teacher salaries. The biggest component of any school budget is teacher salaries. Because teacher salaries escalate sharply with experience, a school with senior staff will therefore spend significantly more on teacher salaries than a school whose staff is more junior. In this context, WSF has the potential to cause major change. If hiring decisions have a direct impact on the school site budget, principals will be forced to confront a fundamental trade-off between quality and quantity of teaching staff. Should our school hire one experienced teacher at \$60,000? Or should we hire two first-year teachers at \$30,000 a piece?

These are the types of decisions that private-sector managers face on a daily basis. By focusing solely on “filling positions”, school districts have been able to ignore the financial consequences of their hiring decisions. Forcing principals to confront such trade-offs could have a major impact on the staffing mix at different schools.

Currently, all three WSF districts get around the potentially revolutionary effects of WSF by charging schools only for “average teacher salaries” rather than using actual teacher salaries. In effect, this policy acts as a subsidy to schools that have senior teaching staffs, protecting them from the financial consequences of having an experienced teaching staff. Schools with younger staff members—often located in poorer

areas—are punished by this system, for their actual expenditures are significantly smaller (on a per student basis).

However, the issue is a political one. Teachers' unions will likely resist efforts to use actual teacher salaries in school-site budgets, since doing so will give schools an added financial incentive to hire young teachers. Such a system may be anathema to unions dominated by highly-paid, experienced teachers.

Houston—the only WSF district whose teachers are not unionized—is also the only district with plans to tackle this very difficult problem. Over the next 7 years, HISD will phase in the effects of a transition to actual teacher salaries. Next year, in 2002-03, Houston schools will face 10% of the financial impact. Our hypothesis is that this policy will lead to a gradual increase in the hiring of younger teachers in Houston schools.

Support for school administrators. In WSF districts, principals have significantly more managerial responsibility. With increased levels of budgetary discretion come complex decisions that can have a significant impact on a school community. Therefore, a successful WSF district will provide significant support for its principals. Edmonton has developed the most comprehensive systems of support for principals. Most important is an accreditation process for future principals. This 20-week program includes evening and weekend instruction on management, instruction, budgeting, etc.

V. Comparison of ERF Systems

Most large school districts in the United States use Enrollment Ratio Formulas (ERFs) to assign resources to schools. In an ERF system, the district's Central Office

tightly controls what resources are available to educators at the school site: Strict mathematical formulas dictate how many teachers a school will have, how often it will have access to counselors and nurses, or how much it will spend on textbooks.

In our study, we have analyzed the resource allocation systems of three districts that use different versions of the ERF: New York's Board of Education (NYBOE), the Los Angeles Unified School District (LAUSD), and the Chicago Public Schools (CPS). These are the three largest school districts in North America.

What follows is a brief comparison of the ERF systems used by these three districts, as well as a discussion of the difficulties that ERF presents for principals and other educators at the school site.

Two issues deserve special attention: (1) Los Angeles allocates many more administrative staff to its schools, when compared to Chicago (see Section F below); and (2) All three systems over-allocate resources to small schools (see Section G below).

Allocation of teachers. The basis of an ERF system is a set of ratios that determine what resources will be allocated to a school. These ratios are established by the Central Office of each district and apply to all schools in the district, regardless of local conditions. In our study, we found that the ratios vary significantly from district to district.

For example, Table 5 compares the ratios used by the districts to assign teacher positions to schools:

Table 5: Students-per-teacher Allocation Ratio for 3 ERF Districts*

Grade Level	LAUSD	CPS	NYBOE
K	20	28	20.8
1st	20	28	26.7
2nd	20	28	26.7
3rd	20	28	26.7
4th	37	31	26.7
5th	37	31	26.7
6th	37	31	26.7
7th	38.5-39.25	31	21.4-23.6
8th	38.5-39.25	31	21.4-23.6
9th	38.5-39.25	25-40	34
10th	38.5-39.25	25-40	34
11th	38.5-39.25	25-40	34
12th	38.5-39.25	25-40	34

*NYBOE provides more teachers than necessary to meet its class-size targets, so that teachers will be available to cover one another. For grades 9 through 12, Chicago has class-size targets for specific subject areas, which drive hiring in academic departments. New York’s high schools use a distinct system that is a hybrid of WSF and ERF. For a complete discussion of the system used by New York’s high schools, see page 18 below.

Due to California’s ambitious class-size reduction effort, the LAUSD has the lowest student-teacher ratios in the early primary grades. However, from Grade 4 all the way through high school, both Chicago and New York have significantly lower student-teacher ratios than Los Angeles.

Allocation of administrators. The districts also have radically different systems for the allocation of administrative personnel (principals, assistant principals, and support staff). Table 6 below shows that the LAUSD is much more liberal than CPS in the assignment of assistant principals (APs) to schools.

Table 6: Threshold enrollment at which additional administration positions are assigned to an elementary school.

Position	LAUSD	CPS
Principal	1	1
1st AP	950	1*
2nd AP	1650	NA
3rd AP	2200	NA

*Indicates that all elementary schools in CPS are assigned one teaching AP position.

In New York, elementary schools are given a monetary allocation—called the “supporting per capita”—of \$348 per enrolled student. Out of this money, each school is expected to pay for administrative salaries, administrative support staff, instructional materials, school aides, and other expenses. For this portion of the budget, New York’s elementary system is somewhat similar to a WSF system, since resources are allocated on a per student basis and principals have budgetary discretion over this pot of money. For a discussion of New York’s high school system, see page 18 below.

Allocation of support staff. Los Angeles also assigns more administrative support staff to its schools. See Tables 7 and 8 below for the enrollment thresholds used by the LAUSD and Chicago to assign each additional support staff to elementary and middle schools, respectively.

Table 7: Enrollment threshold at which districts assign additional support staff to elementary schools.

Position	LAUSD	CPS
1 st admin support staff	1	1
2 nd	1	1357*
3 rd	1200	2242*
4 th	1351	NA
5 th	1851	NA
6 th	2351	NA

*Chicago assigns support staff based on a per-teacher ratio. Numbers assume a student-teacher ratio of 29.5, based on Table 6 above.

Table 8: Enrollment threshold at which districts assign additional support staff to middle schools.

Position	LAUSD	CPS
1 st admin support staff	1	1
2 nd	1	1426*
3 rd	1	2356*
4 th	1	NA
5 th	1	NA
6 th	1	NA
7 th	1800	NA
8 th	2200	NA
9 th	2600	NA

*Chicago assigns support staff based on a per-teacher ratio. Numbers assume a student-teacher ratio of 31, based on Table 6 above.

LAUSD vs. Chicago: different allocations of administrative resources. Los Angeles and Chicago have very different policies for the assignment of administrative staff. As described in Sections B and C above, the formulas used in Los Angeles result in the allocation of a very high number of administrative staff relative to Chicago. For example, take an elementary school with enrollment of 2000. In Chicago, such a school will be assigned 1 principal, 1 AP (who must also teach), and 2 support staff. An LA school of the same size will be assigned 1 principal, 2 non-teaching APs, and 5 support staff.

A similar contrast holds for high schools. A Chicago high school with enrollment of 3500 will be assigned 1 principal, 3 APs, and 6 support staff. To a high school of the same size, LA would assign 1 principal, 4 APs, 11 support staff.

Over-allocation of resources to small schools. As discussed above, ERF systems currently over-allocate resources to small schools. This is because many personnel are distributed on a “per-school” basis rather than a “per student” basis.

Consider two elementary schools in Los Angeles, one with enrollment of 1850 and another with enrollment of 1650. Table 9 shows that both schools are assigned 3 administrators and 4 support staff, despite the fact that School #1 has 12% more students.

Table 9: Assignment of administrative personnel to two Los Angeles elementary schools.

School	Enrollment	Administrators	Support staff
#1	1850	3	4
#2	1650	3	4

On a more global level, these policies mean that the larger a school is, the lower its budget on a per-pupil basis. Figure 4 below shows that this trend holds for the elementary schools that we studied in New York.

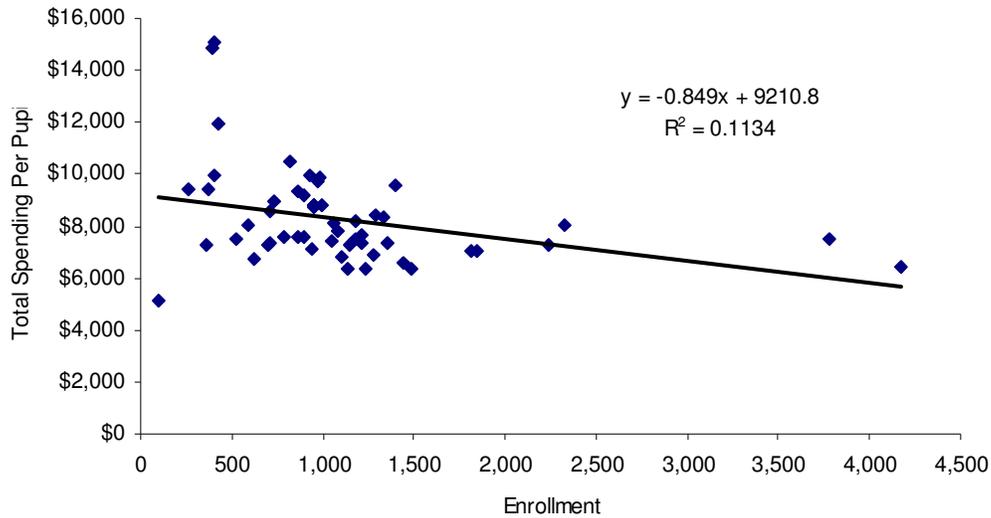


Figure 4: School Size vs. Per Pupil Spending in Selected New York Elementary Schools. The larger the school, the lower the per-pupil budget. (Central Office expenditures associated with direct service to schools have been allocated out to schools.)

New York's elementary schools. In the 2001-02 school year, New York's Board of Education implemented a new policy for the allocation of Special Needs resources to elementary and middle schools. This system, which will continue to evolve, bears some resemblance to the WSF systems discussed above. Total funds for Special Ed, bilingual education, and other programs are allocated to individual students with special needs. These allocations then follow the student out to the local district. However, this system is different than WSF in several important ways:

1. The allocated money follows the student to the local district but does not make it down to the school budget, so the resources are still controlled by an administrative office.
2. Only \$1.37 billion of the budget is distributed in this way, which is slightly more than 10% of NYBOE's total operating budget. The typical student—one without any special needs—does not have any funds attached to him or her.
3. Teachers—the single biggest expense and most important variable in a student's education—are still allocated based on strict enrollment formulas set by the BOE.

Compared to the other districts we studied, New York gives its principals very little discretion over teacher hiring. Job openings must be posted, and principals must hire the most experienced applicant. A waiver of this rule requires a 75% vote of the school's teaching staff.

New York's high schools: a special case. NYC high schools have long enjoyed a system that resembles weighted student formula in that each school is granted a set number of units based on total enrollment. However, there is no weighting: each student counts the same as every other. The school leadership can then determine how to spend the resources, mixing teachers, administrators, counselors, secretaries and other staff.

For example, Park East High School has 775 students and is thus given 42.47 or 43.00 (rounded up) Allocated Units for their use. Each type of position is weighted, as shown in Table 10, based on average cost of salaries and benefits for a person in that position.

Table 10. NYBOE High Schools’ Unit Allocation System: Park East High School, 2000-01

Roles	Weights for Roles	Number in Job	Total Staff Units
Principal	2.12	1	2.12
Assistant Principal-Admin.	1.85	1	1.85
Assistant Principal/Superv.	1.87	1	1.87
School Secretary	0.72	2	1.44
Office Aide	0.46	3	1.35
Guidance Counselor	1.23	2	2.46
Health Aide	0.39	1	0.37
Family Aide	0.37	1	0.37
Teachers	1.00	30	30.00
Total Staff	N/A	42	42.56 (43.0)

This system is similar to WSF in that it allows principals some discretion in building a staff mix that is appropriate for their schools. In addition, it relies on average salaries, much as the WSF districts currently rely on average teacher salaries. However, the use of units—rather than dollars—prevents the school from having total autonomy, and the lack of weights may lead to the “underfunding” of schools with higher concentrations of needy children.

New York is now beginning to move away from this unit-allocation system. The NYBOE now allocates dollars to each of its five high school districts, based on the total number of students. The high school districts are then free to establish their own policies

of allocating resources out to schools. Most districts have thus far decided to retain the unit system, but this may change in future years.

IV. Twelve Suggestions for Successful Implementation of WSF

Based on lessons learned from Edmonton, Seattle, and Houston, we have compiled the following list of “commandments” that may be useful to districts beginning to implement a WSF system. By following these guidelines, district leaders can ensure that the WSF program allocates funds equitably and provides local educators with the right kinds of incentives.

- 1. Distribute as much as possible of the operating budget via the WSF.**
Schools will feel the impact of budgetary discretion only when they have significant resources at their disposal.
- 2. Avoid subsidies for small schools.** If small schools are to succeed, they must do so within the same per-pupil budget as larger schools.
- 3. Phase-in the financial impact of WSF over 2-3 years.** Schools need time to prepare for the significant budget changes that often result from the implementation of WSF. Pilot programs may not be effective, since they can pit schools against one another.
- 4. Phase-in the use of actual teacher salaries over 5-10 years.** Schools need an extended period of time to address the complex financial consequences of their hiring decisions.
- 5. Establish a public forum for making weighting decisions.** Weighting decisions must be driven by the educational needs of different types of students.

Principals, district administrators, parents, and teachers must all accept the weights as valid.

- 6. Base funding on a mixture of enrollment and attendance.** Schools should receive a financial incentive to improve attendance rates. However, policies should not penalize schools that serve students with high rates of truancy.
- 7. Fund secondary schools at a higher base rate than elementary schools.** Historically, secondary schools have required more funds per student than elementary schools, and WSF should reflect this difference.
- 8. Give schools information on expenditures as soon and as often as possible.** To make responsible spending decisions, principals must have access to up-to-date financial information. Financial systems must be transparent, accurate, and up-to-date.
- 9. Make it easy for schools to purchase from outside vendors.** When schools are allowed to purchase products/services from outside vendors, Central Office units must compete for business and therefore push themselves to improve services. Credit cards allow schools to make instantaneous spending decisions.
- 10. Provide appropriate support and oversight for principals and support staff.** To operate in a world of budgetary discretion, new principals need management training. Each school may need one highly-trained support person to serve as the site's business manager.
- 11. Allow parents to choose the public school that best fits their needs.** Public school choice complements a WSF system by creating a financial incentive for schools to improve their educational programs, thereby attracting more students

(and more dollars). Weightings ensure that schools have an incentive to recruit and serve students with special needs.

12. Share information on school performance with educators and parents.

Decision makers must see the educational consequences of their spending decisions. Since WSF empowers schools to target programs to the local student population, local educators need accurate, up-to-date information on student achievement.

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