NEVADA POLICY RESEARCH INSTITUTE

analysis

Thoroughly Inadequate:

'School Funding Adequacy' Study Filled with Evasions

by Richard P. Phelps, Ph.D.

Executive Summary

Proponents of increased spending on public schools often describe funding adequacy studies as objective and scientific. They are neither. Study estimates of "adequate" education funding amounts vary widely across states and by method used, even when made by the same contractor.

Augenblick, Palaich and Associates (APA), the most prolific of several groups conducting this type of study for a fee, released its latest for the Nevada Legislature in August 2006. APA recommends doubling public expenditure on Nevada's public schools.

Funding adequacy studies are often used to precipitate lawsuits. However, Nevada's Constitution — unlike those in other states — contains no language that would support an "adequacy" justification. Moreover, by some measures, Nevada maintains the most equitably funded school system in the country, lending no support for a suit on "equal opportunity" grounds either.

The education standards movement and, more recently, the federal No Child Left Behind (NCLB) Act play into the funding adequacy drama. If states require that students and schools meet specific performance targets, it is argued, states should provide "adequate" resources for meeting those targets.

APA chiefly employed two estimation methods—the "successful schools" and "professional judgment" approaches. Both are simplistic and produce unreliable results. With the former method, APA relied on a three-year trend in test scores to judge school success and ended up selecting a disproportionate number of magnet schools and schools labeled "in need of improvement" under NCLB criteria. The latter method asked panels of teachers and school administrators how much money they needed in order to be successful in meeting standards. Not surprisingly, they estimated high.

These estimation methods rest on three assumptions: educators bear no conflict of interest when estimating their own resource needs; legislators will (and should) implement the funding recommendations of the panels exactly as the panels prescribe; and a one-to-one correspondence exists between education spending and student achievement.

In cases of extreme deprivation—in some very poor countries, for example—the correlation between spending and achievement can be rather high. Given the current structure of United States school systems, however, researchers have difficulty finding any correlation between spending and achievement. The most optimistic estimates claim a correlation of 0.1, meaning a doubling of education spending could be expected to increase student achievement by just 10 percent.

A vast research literature on effective schools reveals that the key features leading to improved student achievement are related not to money, but to the quality of school management and leadership.

Nevada Policy Research Institute

The Nevada Policy Research Institute is an independent research and educational organization dedicated to improving the quality of life for all residents of the Silver State through sound free-market solutions to state and local policy questions. The Institute assists policy makers, scholars, business people, the media and the public by providing non-partisan analysis of Nevada issues and by broadening the debate on questions that for many years have been dominated by the belief government intervention should be the automatic solution.

Committed to its independence, the Nevada Policy Research Institute neither seeks nor accepts any government funding. It enjoys the support of individuals, foundations and businesses who share a concern for Nevada's future and recognize the important role of sound ideas. The Institute is a nonprofit, tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. For more information on programs and publications of the Nevada Policy Research Institute, please contact:

Nevada Policy Research Institute
1700 E. Desert Inn Rd.
Suite 405A
Las Vegas, Nevada 89169
(702) 222-0642 ◆ Fax (702) 227-0927
www.npri.org ◆ office@npri.org

Thoroughly Inadequate:

'School Funding Adequacy' Study Filled with Evasions

by

Richard P. Phelps, Ph.D.

Nevada Policy Research Institute

September 2006

Introduction

> "We want a definitive answer of what we need for education in Nevada. This is one of the ways we believe the question can be answered rather than guessing or trying a little fix."[1]
>
> — *Nevada State Education Association President Terry Hickman*

Virtually all adequacy studies end up recommending substantial increases in spending.

The point of view expressed by the union leader above is one Nevadans can expect to hear more often. Mr. Hickman refers to the "Study of the Adequacy of School Finance in Nevada."

In 2005, the Nevada State Legislature enacted Assembly Concurrent Resolution 10 (ACR 10) and named six of its members to a "Committee on School Financing Adequacy." Its responsibility was to award and oversee a contract for a Nevada education funding adequacy study. Three firms bid on the contract and the Committee voted, 4 to 2, to hire Augenblick, Palaich and Associates (APA) of Denver, the most prolific of several groups doing these types of studies for a fee. APA conducted its Nevada study from winter through summer 2006.[2]

Does their adequacy study or, for that matter, could *any* adequacy study, really provide "a definitive answer" to Nevada's education funding needs? What about productivity? Adequacy refers to inputs, but what about outputs? Do adequacy studies consider productivity, and if they do not, are adequacy studies themselves adequate?

What is 'funding adequacy'?

> **ad • e • quate** 1. Sufficient to meet a need. 2. Barely satisfactory or sufficient. [Latin, to make equal to, or from]
>
> SOURCE: *The American Heritage College Dictionary*, 1997 edition

Given the dictionary definition of the term "adequacy," it might surprise some readers to learn that most education funding adequacy studies have chosen emulative (i.e., "successful") schools from socio-economically advantaged communities rather than successful schools from less advantaged areas that make do with less. Furthermore, most adequacy studies ignore non-public schools, and Nevada's study is no exception in this respect. Roman Catholic parochial schools are legendary for educating disadvantaged children to substantially higher levels of achievement than their public school counterparts, sometimes at half the expense.

Moreover, given the dictionary's definition, it may also seem ironic that virtually all adequacy studies end up recommending substantial *increases* in spending but, at best, brush briefly over the topic of efficiency. According to Michael Weintz,

> The Las Vegas Chamber of Commerce reviewed the results of studies conducted by Augenblick for a handful of other states across the country. In every case, Augenblick determined the state was not funding education sufficiently to provide an adequate education for all of its residents. Not once did a report say funding levels were too high, or that the current funding levels were appropriate but could be used more efficiently. Instead, recommendations generally suggested an increase of about 10 percent in school spending over current levels.[3]

Education finance has developed its own connotations for "adequacy" that diverge from the dictionary. Moreover, those meanings keep changing, buffeted about by three dynamic processes: the efforts of advocacy groups to establish a use of the term favorable to their interests; the efforts of technicians to construct quantitative measures for the term that are workable with available data and analytic techniques; and a growing number of court judges struggling to find workable legal definitions.[4]

One explanation for the current popularity of funding adequacy studies can be found in their historical genesis. Some advocates of increased public spending for poor children had labored for years arguing an equity case in state courts, without success. Specifically, cases were brought in state courts in which plaintiffs argued that children residing in school districts in poor communities, funded largely from a local tax base (usually a local property tax), were being treated inequitably. They argued on constitutional grounds—that unequal school financing violated the equal-protection clause in some state constitutions—for more state funding of education and for more equitable state funding.[5]

State judges, for the most part, decided that the constitutional grounds for expecting equal fiscal treatment were shaky, as there is no language in the constitutions specifically addressing the notion of educational equity. Some state constitutions, however, require the provision of an adequate education. (Nevada's mentions neither equity nor adequacy.) So, some equity advocates, seeing greater prospects for success with cases based on the notion of adequacy, shifted their arguments, strategies, and vocabulary.[6]

The adequacy strategy has not persuaded all state judges. Indeed, court decisions range from almost complete acceptance of the adequacy arguments, with strong, directive decisions (e.g., Wyoming, Kentucky, North Carolina) to complete rejections of the claims on the grounds that such matters were legislative, not judicial, business (e.g., Illinois, Rhode Island, Florida). Other courts have given plaintiffs partial victories (e.g., Arizona applied the arguments to school buildings, but not programs). Still others have affirmed that education should be "adequate," without offering much direction or definition.[7]

The education standards movement and, more recently, the federal No Child Left Behind (NCLB) Act also play parts in the adequacy drama. The script reads like this: if states require that students and schools meet specific performance targets, they should provide adequate resources for meeting those targets.

Who's supposed to decide these things?

As one may recall from history class, the U.S. Constitution includes no mention of education. Therefore, as one may also recall from history class, that issue remains the responsibility of our country's original founding entities, the states.

Nevada's constitution requires the state to provide "a uniform system of common schools" for six months a year. There is no mention of what those schools are supposed to do or how well they are supposed to do it. Words and phrases relevant to the issue that are commonly found in other state constitutions, such as "thorough and efficient," "adequate," or "quality", are absent from Nevada's.[8]

As is true for the U.S. federal and other state governments, the popularly elected legislature in Nevada is constitutionally granted the power of the purse. In managing their power, legislators must balance the limited resources at their disposal against the many competing needs and wants of their constituents. K-12 education's needs and wants represent a very important subset, but only a subset.

If the normal legislative process were to be bypassed in Nevada, either through a court order or because of the perceived threat of one, and the State Legislature capitulated to passing along an adequacy study-recommended tax increase unhindered, all Nevadans would lose. The trade-offs and deal-making of the normal legislative process offer hope that productivity improvements will be made by education's vested interests in exchange for more money. If they do not have to deal, productivity is unlikely to improve. As Michael Weintz of the Las Vegas Chamber of Commerce put it:

> The Nevada school system may need more money, but only as part of a broader reform effort that will deliver significant student improvement. Until Nevada puts real reform and teacher accountability systems in place, no amount of money will deliver measurable improvement in student achievement."[9]

If the normal legislative process were to be bypassed in Nevada, all Nevadans would lose.

Adequacy studies, the four species

Some economists consider all four methods illegitimate.

Adequacy studies fit into four general types, distinguished by their method of estimation. They are:

Statistical Projection (i.e., cost function, production function, econometric)

Research Literature Review (i.e., evidence- or research-based, best practice)

Model Schools (i.e., successful schools)

Educator Panels (i.e., professional judgment)

Some economists consider all four methods illegitimate.[10] That is, they believe that none of them provide valid and reliable estimates of "adequacy," by any of the term's commonly-used definitions.[11]

At least in theory, however, the first method—statistical projection—*could* provide roughly valid and reliable estimates of some version of "adequacy." In this method, quantifiable factors correlated with student educational achievement are entered into a large equation or set of equations. Computer programs then calculate the relative degree of correlation that each of the factors has with educational achievement.

The problem with this method has always been twofold: some important background factors tend not to be quantified (e.g., how well a student's teachers teach) and other important background information tends not to be available (e.g., whether or not, or how, a student's parents aid learning at home).[12]

The second adequacy study method—the research-, or evidence-, based approach—suffers from complementary deficiencies. This method consists of sifting through the research literature for funding estimates other researchers have made. The research base on education expenditure, however, is full of the first type of adequacy study—the statistical projection—which, if no good, will still be no good after being written up or read by someone else.[13]

Given the crippling problems with the first two, most funding adequacy studies rely on the third and fourth methods of selecting model schools (or districts) and/or assembling educator panels. APA calls the first the "successful schools approach", and the second the "professional judgment approach".

These two approaches are not methodologically superior to the first two; indeed, it would not be unreasonable to describe them as simplistic. For his part, John Augenblick identifies the second two approaches as "the most effective."[14] "Effective" in this case could mean "easier to do."

Both approaches are fairly straightforward. The successful schools approach identifies schools that have met a relevant performance standard (which, these days, can be Adequate Yearly Progress (AYP) as defined by the NCLB Act). "Successful schools", naturally, tend to be more plentiful in some districts than others. For its Nevada study, APA assembled a list of successful schools for each level of education (i.e., primary, middle, and high school) and then looked in detail at those schools' expenses. How much did each of these schools spend?

The professional judgment approach is a bit different. With it, panels of educators are assembled, and they estimate what resources are needed, and in what quantity, for a school to achieve the relevant performance level. For Nevada, APA assembled groups of educators, both teachers and administrators, from all levels of K-12 education and from throughout the state.

Evaluating the 'successful schools' approach

APA's successful schools approach for Nevada is substantially different from that which it has used in the past in other states. In Maryland in 2001, for example, APA selected schools with the highest test scores on state exams. The result was a set of schools that stood out more for favorable socioeconomic and demographic characteristics than for anything the schools did programmatically.

Value-added studies entail identifying schools that do the best job of *improving* student achievement. Some students begin their schooling career with disadvantaged

backgrounds and low levels of knowledge and skills. Others are more affluent and advanced. Schools that produce the greatest gains for students over their individual baseline performances can be called high value-added schools and they are found in wealthy and poor communities alike.[15]

APA's version of a value-added study consists of searching for increases in the most recent three-year trend in test scores to identify their "successful schools." APA argues that they are incorporating, and they are obligated to incorporate, the Adequate Yearly Progress (AYP) calculation method that is prescribed by the federal No Child Left Behind (NCLB) Act.

Their method falls short of a good value-added model in several respects, however, including:

- APA does not control for non-school-related background factors or for student or teacher migration.
- Three data points hardly represent a large amount of information from which to judge a school.
- The most essential work in a school takes place inside the classroom, but APA is only looking at school-level data.
- APA does not account for how schools have handled test administrations, particularly in those aspects that influence student test performance (e.g., providing motivational incentives, increasing the test-curriculum alignment).

Moreover, concern emerged that APA had not made the calculations correctly. Considerable discussion occurred in Committee hearings over the inclusion (or not) of nonpublic schools in the successful school analysis, as a means of providing the study with some semblance of a control group.[16] Committee members made even more quizzical statements after they received APA's selection of Nevada's "successful schools." A disproportionate number of the high schools (5 of 12) were magnet schools, and many of the other schools on the list were listed by the state as "in need of improvement" *because they had not met the minimal NCLB standards for progress*.[17]

Evaluating the 'professional judgment' approach

APA augments its "successful schools" approach with a "professional judgment" approach. The firm gathers public school educators—teachers and administrators—and asks them what resources they would need to bring a school up to a certain threshold level—for example, the level of achievement test scores specified by the federal NCLB Act. The group then considers all the cost components supposedly required—labor, materials, supplies, services, and so on—and sums them.

As the reader might surmise, results depend substantially on the particulars of who is chosen to serve on the panels. Interestingly, APA insisted on public school educators exclusively. While this makes some sense—public school educators are most intimately familiar with what it takes to run a public school—it also creates at least three threats to the validity of the study:

- First, there's a danger of professional myopia. School personnel may assume certain conditions to be the way things are and must be, whereas outside experts might question these assumptions.
- Second, public school educators generally have little training in operations research, logistics, or finance, and little experience operating in a marketplace where there are competitive pressures keeping costs down.
- Third, public school educators have distinct incentives to estimate costs liberally, as they will be direct beneficiaries of any funding increases.[18]

As APA was not familiar with many, if any, of Nevada's teachers and administrators, they relied on the state education department, hardly an unbiased source, for referrals.

APA assembled 39 Nevada educators in six professional judgment panels, each with a different focus. Included were: small schools in small districts, schools in larger districts, district-level resources, vocational education, and special education. The district-level panel reviewed the work of the

Results depend substantially on the particulars of who is chosen to serve on the panels.

Panel meetings were not open to the public.

school-level panels. A sixth, three-member, statewide review panel considered the work of the other five panels and "resolved any inconsistencies."

Panel meetings were not open to the public. According to John Augenblick, "we certainly have never operated in a situation in which we have eight people meeting around a table with two of us, and an unlimited number of people sitting around watching. No one has ever asked us to do that." According to the Minutes of the June 2 Committee meeting, Augenblick said "APA had never done it in any other way" and "he had never seen that or heard of it", despite the fact that the other two bidders for the contract had both strongly recommended as much at the January 12, 2006 Committee meeting."[19]

Justin Silverstein, also of APA, added "the main reason the panels were not open to the public was because… they wanted to discuss their ideas without worrying about saying something that might get them in trouble. …APA wanted panel members to feel they could say things without the idea that everything they said was being written down and recorded. …From what APA had experienced, opening the panels to public scrutiny would impede the work of the panels."[20] (But, remember, John Augenblick claimed that APA had no such experience.)

Under pressure, APA consented to allow one individual to observe, Joe Enge of EdWatch Nevada and the Nevada Policy Research Institue.[21] Mr. Enge reports that panelists were not allowed to bring school or district budgets or any other reference documents. Instead, they were given packets assembled by APA that included "the characteristics of hypothetical [successful] schools" as determined by the research literature review conducted by the two aforementioned APA consultants. The job of the panelists was to identify the resources that would be needed for a school or district to achieve success (i.e., to reach a required level of performance). APA's instructions to the panelists were:

> Your job is to create a set of programs/curriculums/services designed to serve students with particular needs in such a way that the indicated requirements/objectives can be fulfilled. Use your experience and expertise to organize personnel, and materials, and technology in any way you feel confident will produce the desired outcomes.[22]

Given that panelists were not allowed to bring, much less consult, budgets or other reference documents from their schools or districts, they were left to guess about those resource needs from memory, or rely on whatever information was provided by the two APA consultants. I have been unable to obtain copies of these two reports from Committee staff. Mr. Enge was also not able to obtain, nor even peruse, *any* of the materials in the panelists' packets. The information provided by APA to the "Professional Judgment" process, he was told, was proprietary, copyrighted, and not available to the public.

I attended an APA professional judgment panel in Maryland a few years ago and I, too, came away from the meeting empty handed—APA materials there were just as secret and unavailable as they have been in Nevada.

Wild shots at a barely visible target

When funding adequacy consultants arrive in a state capital to hawk their services, legislators plugged into the education establishment grapevine probably know of them. At least some of the remaining legislators, however, may have no clue as to what, why, or for whom they are voting, and their votes can end up as wild shots at a barely visible target. It is only after months of mind-numbing obfuscation that these previously-uninformed committee members realize that they were hoodwinked.

Whether by coincidence or design, Nevada's committee chose the contractor offering the most opaque process, the least amount of work overall, and the least cau-

tion regarding its methods. The other two groups bidding for the Nevada work had the integrity to warn the Committee that funding adequacy studies were unreliable, with different methods sometimes produced widely varying estimates.[23] According to one bidder

> …of the 33 states that have had adequacy studies, only a handful have used multiple approaches, which have produced drastically different results. For example, the state of Kansas used the successful schools and professional judgment approach to define adequacy, but there was over a 25 percent variation in the results [that were produced by APA].[24]

He offered to follow all four adequacy study approaches for Nevada, and anticipated that they would produce a wide range of estimates:

> The strong need to examine adequacy through 'multiple lenses' is due to the limitations of each of the four methods that currently exist to identify adequate funding levels, and the significant variations that can result from each approach.[25]

"Adequacy studies are far from an exact science, and different methodologies can produce drastically different results. …only producing one or two numbers limits the Legislature's ability to maintain control over the process. Therefore, …Legislatures should be provided with as much information as possible as they wrestle with these complex issues."[26]

Both of the groups not awarded the contract proposed controls on the professional judgment estimates, one by using multiple panels, the other by surveying a representative sample of Nevada's school personnel directly.[27] Moreover, both emphasized the need to put checks on educators' conflicts of interest when using the professional judgment approach. The process should be as open and transparent as possible, with the panels obligated to defend their decisions to a separate stakeholder panel that includes non-educators who have an incentive to contain costs.[28]

In its own funding adequacy study in Maryland, APA compared its Maryland resources estimates (that resulted from successful schools analysis and professional judgment panels) to estimates derived in earlier APA studies in South Carolina, Wisconsin, Wyoming, and Oregon.[29] In Oregon APA concluded that the optimal number of teachers for a 500-pupil elementary school was 23.5. In Maryland and Wyoming, however, it was 33. Teacher salaries comprise the majority of current expenditures in education. Thus, APA's own research would suggest something close to a 50 percent difference in the resources needed (and, thus, the expenditure needed) for a successful school in Oregon by contrast to one in Maryland or Wyoming. Are elementary school students in Oregon really so different from those in Maryland and Wyoming? APA estimates range from 36 teachers needed for an 800-student "successful" middle school in Maryland or Oregon to 51 needed in Wisconsin or Wyoming. They range from 49 teachers needed for a 1,000-student "successful" high school in Oregon to 69 needed for one that size in Maryland or Wyoming.

Other resources, such as "other instructional staff," library and media specialists, teacher aides and paraprofessionals, and school administrators exhibit even wider variations in APA estimates. All these estimates were produced by the same consulting firm, ostensibly using similar estimation methods across states and presumably endeavoring to minimize variation in the estimates.[30]

Outrageous assumptions

Underlying most funding adequacy studies, and emphatically underlining the one produced by APA for Nevada, are three requisite assumptions. If any of these assumptions is invalid, the funding adequacy study should be considered worthless. So let us consider the validity of these assumptions,

1) Unlike other humans on planet Earth, U.S. educators are ethically pure and wholly objective, and they never let their judgments be affected (even unconsciously) by their self interest. Thus, the estimates of resource needs made by "professional judgment" panels should be considered reliable.
2) After the funding adequacy study is

Underlying most funding adequacy studies are three requisite assumptions.

They ended up with a ludicrous inflation adjustment of 7.8 percent,

complete, its recommendations will be adopted exactly as prescribed. For example, if study panels assert that "successful schools" allocate resources in a certain pattern, the Nevada state legislators will follow that prescribed pattern precisely when they allocate any new windfall of education funding, *disregarding any contrary interests of their own or their constituents*.

3) There is a one-to-one correspondence between increased spending and increased student academic achievement (i.e., spend 1 percent more, and achievement will increase by 1 percent). Money is all that is required to produce student achievement gains.

Funding adequacy studies promote cost inflation

When proponents argue that increased spending is needed for the sake of the children, they imply that the additional funds, or most of them, will result in the children receiving more and/or better services. Funding adequacy studies, however, produce static analyses, i.e., they assume that today's cost structure will be tomorrow's. For example, they assume that teacher and administrator unions will sit on their hands when the funding windfall arrives and not seek gains in salaries, benefits, and job protection. In fact, the availability of more funds typically results in the same services costing more.[31]

As if the inherent inflationary effect of the adequacy study process were not enough, APA has added an inflation adjustment to its estimates. Actually, one could legitimately say they added *two* inflation adjustments. APA started with the well-known consumer price index, which they claimed was 3.4% in 2005 for the United States as a whole. Then, in order to adjust for any Nevada-specific differences, APA obtained cost-of-living estimates from the American Chamber of Commerce Researchers Association (ACCRA). They calculated a weighted average cost-of-living increase for 2005 from the estimates they could obtain for Las Vegas, Reno, and Carson City of 4.3%.

At that point, one would expect them to make some kind of adjustment that would have increased the 3.4% inflation number from the CPI to something closer to the 4.3% number from ACCRA. After all, the two estimates overlap quite a lot and have far more in common than not. That is, the inflationary factors that make up the national number are included in the Nevada number. Inexplicably, APA chose to *multiply* the two numbers (1.034 x 1.043 = 1.078) or, as Senator Beers aptly put it, "inflate the inflation rate." They ended up with a ludicrous inflation adjustment of 7.8 percent, which they argue should be applied to educators' salary increases.[32]

Short visits to the Web sites of ACCRA and U.S. Bureau of Labor Statistics (where the consumer price index is calculated) are revealing. ACCRA asserts that its "index does not measure inflation" and "index data from different quarters cannot be compared," "because each quarterly report is a separate comparison of prices at a single point in time, and because the number and the mix of participants may change from one quarter to the next."[33] Moreover, "the index reflects cost differentials for the standard-of-living present in a professional and/or managerial household. Home ownership costs, for example, are more heavily weighted than they would be if the index were structured to reflect average costs for all urban consumers." For inflation information, ACCRA recommends consulting the Bureau of Labor Statistics.

How much money?

The Augenblick, Palaich & Associates estimates for "adequate" education in Nevada as of early August 2006 put "actual spending per weighted student" for the fiscal year 2002–2003 at $4,916. After applying the firm's inflation adjustment, it becomes $5,421 for the year 2003–2004.[34]

The bottom line from the professional judgment panels, however, is $10,812 per pupil, or more than double the number APA started with.[35] APA's published estimate for per-student expenditure in their final report (pp. 85, 88) is lower—around $9,650—but the firm does not include outlays for capital projects, debt service, pupil transportation, and food service.

If money is not the answer, what is?

Education researchers have conducted several hundred quasi-experimental studies over several decades that are most often referred to as the "effective schools studies." Generally, the researchers looked at groups of schools that were alike based on their background factors, including their level of funding, and then looked more closely to see how they were run and compared these evaluations of the schools' operations to their student achievement gains over time.[36]

Findings from the effective schools studies are remarkably uniform. What makes an effective school—i.e., a school that increases student achievement? Among the characteristics most often mentioned are quiet and orderly environments, a steadfast focus on academic improvement (rather than, say, athletics, social activities, or just getting by), administrators who consider themselves academic leaders, confidence that all students can achieve academically, consistent monitoring of student progress, and clear goal-setting (e.g., high-stakes tests, honors or rewards). In the effective schools literature, schools spending the same amount of money on similar students can vary dramatically in their educational achievement gains.

Research conducted at the *classroom* level demonstrates that the level of a teacher's basic knowledge and skills has a very strong bearing on student achievement,[37] far more than any factor that requires increased funding, including teacher pay.[38] In most U.S. public schools, however, parents have no control over who get hired as principals or as teachers.

What can (and should) be done instead

One can be sure that increases in spending on the public schools will not significantly increase Nevada student academic achievement. So, what could increase achievement? How could Nevada's public schools become more effective schools?

To ensure that Nevada's teachers and school administrators focus on academic achievement, it should be easier to remove those teachers and administrators who do not. Performance incentives could be tried, provided that they are tied to increases in student achievement (and not, say, given to principals' favorite teachers or superintendents' favorite principals).

To attract high-quality teachers, their pay should be allowed to vary by subject field, rather than merely by seniority. College graduates trained in mathematics, science, and industrial arts have more, and more remunerative, career alternatives than do language arts and social studies teachers. This is simply a fact of our times. Public schools have been trying to deny the existence of the wider labor market for too long a time. Consequently, they have trouble hiring good teachers in competitive fields.

To attract high-quality teachers to the poorest, toughest neighborhoods, pay should vary by location. Over time, good teachers tend to move to schools where the work is easier, less stressful and less dangerous. Thus, schools in neighborhoods that need the most help end up with less-experienced teachers, often on emergency credentials, or those unsuccessful at landing a job elsewhere. Cynics may call it "combat pay," but these schools need the help it could bring.

To make the public schools more efficient, parents should be given more school choices. Even within the current set of public schools, more choice could be made possible with open enrollment arrangements.

None of these efforts would require additional spending.

Changing perspective from neediness to productivity

Administrators of effective schools focus on academic achievement, and they see themselves primarily as academic leaders. Administrators of effective school systems need be no less focused on academic achievement. For example, better measurement of learning and better linkage of learning to teacher and administrator salaries would be far less expensive than across-the-board salary and benefit increases, more personnel, and new facilities.

The most promising method for changing

Schools spending the same amount of money on similar students can vary dramatically in their educational achievement gains.

These results provide no estimates for Nevada's funding needs that can be believed with any conviction.

the focus to productivity is a value-added measurement system that consistently monitors achievement for every student and every student's teacher. Value-added systems are in place in Tennessee, Ohio, and other states. A successful pilot program has been adopted in Denver, with teacher union support.[39]

Simply adding more money to the same mix is not likely to boost productivity; it might even lower it.

Can't means you don't want to

Advocates of funding adequacy studies often give the impression that there is simply nothing other than spending more money that can be done to improve public schools. To the contrary, the environment for increased academic achievement could improve dramatically without any more money, if educators were willing to allow it. The only people preventing educators from implementing the several suggestions mentioned above are educators themselves.

Advocates of more spending often bristle at the argument that *how* money is spent is more important than *how much* is spent. Indeed, they may feel affronted by the implication that schools are not already making their best effort to spend productively. But simply given more money, schools are likely to spend it in the same old cost-ineffective ways. Given a windfall and typical political pressures, the easy road is to give school administrators and unions what they want, buy frills, and otherwise spend the money in ways that have little impact on student achievement.[40]

Currently, most public school districts have little discretion in how they spend the overwhelming majority of their revenue. They have signed binding legal (labor) contracts encumbering most of their funds. Moreover, they are subject to extremely restrictive rules as to whom they can hire or fire. Under these conditions, of any added funding very little is likely to produce incentives for improved quality or efficiency. According to the refreshingly frank, but losing, bidder for the adequacy study contract, R.C. Wood:

> …the findings from adequacy studies have seldom been implemented. This is due in part to the fact that it is often difficult to incorporate the findings into a state's education finance formula. …those that say simply adding more money will improve performance contradict research, which shows that increased funding, in and of itself, does not increase student performance.[41]

Unless the rules change, more funding adequacy settlements are likely only to increase costs. Indeed, acceding to the recommendations of funding adequacy proponents can lead to an endless succession of adequacy studies and court-mandated funding increases. Some schools are unlikely to ever meet state-required performance thresholds if they continue to spend in the accustomed ways. Years of spending and failure will then likely be addressed by another legislative committee, more studies and more recommendations for increased spending. The unthinking belief that spending alone will improve things only puts off the day when productivity issues must be seriously examined. Meanwhile, another generation of children is lost.

The *un*scientific method: Neither valid nor reliable

The APA methodology does not follow any scientific method. Given their secrecy and their prohibited, proprietary instructions, documents, and data, their method is neither transparent nor falsifiable. Given their almost flippant refusal to include nonpublic schools in their analyses, their method includes no control groups.[42] Given APA's refusal to concede the low reliability of their method, these results provide no estimates for Nevada's funding needs that can be believed with any conviction.

Following currently standard methodologies for estimating state funding "adequacy" engenders statistical series such as those printed annually by the periodical *Education Week*. Their statistical compilation, *Quality Counts, 2004*, for example, produced such anomalies as an adequacy "grade" of 93 (out of 100) for West Virginia, a perennial low performer on standardized achievement test score gains, and a grade of 64—dead

last among the 50 U.S. states—for Utah, sometimes the highest performer among the 50 states on standardized achievement test score gains. For its part, Nevada, with the most equitably financed public school system in the country, ranked two places above Utah (Arizona ranked in between the two, at second to last).[43]

On defending against funding adequacy lawsuits

Some believe that the completion of Nevada's adequacy study is the leading edge of a lawsuit—a lawsuit that could be brought at any time over the next several years should the state legislature not increase, and continue to increase, state funding for the public schools, as the APA study recommends.[44]

Gratefully, an abundance of good arguments and evidence exist to counter any such lawsuit. For example, to counter the *assumptions* of the APA study:

- There is no basis in the Nevada Constitution, which mentions neither "adequacy" nor "equity."
- There is no equity (or, "equal opportunity") basis, as Nevada's public schools are already the most equitably funded in the nation.
- More spending would have only a weak effect on educational achievement, as even the most optimistic studies calculate just a 10 percent correlation between the two.
- An abundance of evidence from several hundred research studies shows that factors unrelated to spending—about half them factors under educator's own control—influence student achievement gains.[45]
- There are thousands of schools that do a great job of increasing educational achievement with little money. Some of them are non-public, but many of them are public. They do it by making academic achievement their only priority.
- Recent studies attempting to verify whether or not the achievement of the lowest achieving students rose toward equalization after the successful completion of adequacy lawsuits have found no evidence that they did so.[46]

Arguments to address the quality (or, lack thereof) of the APA study itself could include:

- APA was selective in both its inclusion and exclusion of data. For example, they dismissed out of hand the consideration of nonpublic schools.
- APA was selective in both its inclusion and exclusion of "experts" to serve on its professional judgment panels, allowing only those with a self interest in spending increases, and disallowing those with an interest in moderating that spending.
- APA employed no check on the double counting of resource needs in the professional judgment panel estimates. Effort was focused on assuring that all relevant separately-countable resources were included. But some resources overlap or complement the effect of others and, when that overlap is not subtracted out, the resulting estimates will be inflated.

Addendum

Amid the din, it may be difficult to distinguish between legitimate arguments for increased education spending and those from funding adequacy studies or court cases. But, the fact remains that one can be an advocate for increased education spending—for any reason whatsoever—and still be opposed to using invalid funding adequacy rationales to coerce that increased spending.[47] The Nevada State Legislature is free to increase expenditures for the public schools any time it wishes, for any reason it wishes, or not, also for any reason it wishes.[48] There is no legitimate reason why a funding adequacy study should sway its thinking on the matter either way.

An abundance of good arguments and evidence exist to counter any such lawsuit.

Richard P. Phelps, Ph.D.

A native of St. Louis, Missouri, Richard P Phelps holds a doctorate in Public Finance from the Wharton School for Commerce and Finance at the University of Pennsylvania, other degrees from Washington, Indiana, and Harvard Universities, and taught secondary school mathematics in the village of Baskouré, Burkina Faso (West Africa). He has held posts at the Organisation for Economic Co-operation and Development in Paris, the U.S. General Accounting Office, Westat, and Indiana's Education Department, and received research fellowships from the Educational Testing Service, the National Center for Education Statistics, and the American Education Finance Association. Phelps is the author of *Kill the messenger: The war on standardized testing* (Transaction, 2003, 2005, 2007) and editor and co-author of *Defending standardized testing* (Lawrence Erlbaum, 2005) and *The anti-testing fallacies* (American Psychological Association, 2007).

End Notes

1 Ed Vogel, Lawmakers rip pay raise analysis, *Las Vegas Review-Journal*, June 3, 2006. For similar sentiment, see "School Funding Adequacy—What it Costs To Do the Job Right: 'Adequacy' defined: After you crank out educational standards, you cost out what it takes to implement them. It's really that simple." National Education Association. Available at: [http://www.nea.org.neatoday/0209/news18.htmlmode=print]

2 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), October 27, 2005 & January 12, 2006; Ed Vogel. "Funding level of schools to be measured." *Las Vegas Review-Journal*, January 13, 2006.

3 The Education Money Trap is Set for Nevada Taxpayers: Why does an 'adequate' education always have to mean more $$$?" *Latest News*, Las Vegas Chamber of Commerce, April 6, 2006. Downloaded [June 3, 2006] from http://www.lvchamber.com/cgi/foxweb.dll/wlx/cs/wlxenews?cc= LVCC1&action=DISPLISTDET&docid=566.

4 Robert Berne and Leanna Stiefel, Concepts of School Finance Equity: 1970 to the Present, Chapter 1 in National Research Council, Committee on Education Finance, *Equity and Adequacy in Education Finance: Issues and Perspectives*, 1999. See also, National Research Council, Committee on Education Finance, Equity II – The Adequacy of Education, Chapter 4 in *Making Money Matter: Financing America's Schools*, 1999.

5 Paul A. Minorini and Stephen D. Sugarman, Educational Adequacy and the Courts: The Promise and Problems of Moving to a New Paradigm, Chapter 6 in National Research Council, Committee on Education Finance, *Equity and Adequacy in Education Finance: Issues and Perspectives*, 1999.

6 Melissa C. Carr and Susan H. Fuhrman, The Politics of School Finance in the 1990s, Chapter 5 in National Research Council, Committee on Education Finance, *Equity and Adequacy in Education Finance: Issues and Perspectives*, 1999.

7 Paul A. Minorini and Stephen D. Sugarman, School Finance Litigation in the Name of Educational Equity: Its Evolution, Impact, and Future, Chapter 2 in National Research Council, Committee on Education Finance, *Equity and Adequacy in Education Finance: Issues and Perspectives*, 1999. See also, National Research Council, Committee on Education Finance, Equity II – The Adequacy of Education, Chapter 4 in *Making Money Matter: Financing America's Schools*, 1999.

8 The Constitution of the State of Nevada is available at: [www.leg.state.nv.us/Const/NVConst.html].

9 Michael Weintz, "The Education Money Trap is Set for Nevada Taxpayers: Why does an 'adequate' education always have to mean more $$$?" *Latest News*, Las Vegas Chamber of Commerce, April 6, 2006. Downloaded [June 3, 2006] from http://www.lvchamber.com/cgi/foxweb.dll/wlx/cs/wlxenews?cc= LVCC1&action=DISPLISTDET&docid=566.

10 For example, see the writing of Lew Solmon, Robert Costrell, or Erik Hanushek.

11 To clarify, adequacy studies are not typically conducted by economists but, rather, by folk with doctoral degrees in education finance from education schools.

12 For a brief overview of this research literature, see Harold Wenglinsky. "School District Expenditures, School Resources and Student Achievement: Modeling the Production Function," in *Developments in School Finance, 1997*. U.S. Department of Education, pp.101-103.

13 APA employed a small version of a research-based approach, hiring three consultants to submit estimates of the resource needs of "successful schools." Interestingly, John Augenblick admitted in the June 2, 2006 Committee hearing that "Two out of the three panel members had completed the task, but one member told Mr. Augenblick he had given up and found it almost impossible to look at the research and do what had been asked of him." See Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), June

2, 2006, p.22.

14 John Augenblick, letter to Bob Atkinson, Fiscal Analysis Division, December 15, 2005.

15 See, for example, John E. Stone, Value-Added Assessment: An Accountability Revolution, Available at [http://www.edexcellence.net/foundation/publication/publication.cfm?id=15&pubsubid=51&doc=pdf]; James H. Strong & Pamela D. Tucker, *Teacher Evaluation and Student Achievement*, Education Consumers Clearinghouse [http://www.education-consumers.com/briefs/march2001.shtm]; An excellent source for information on value-added models is Battelle for Kids, http://battelleforkids.com/.

16 See, for example, Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), March 28, 2006, p.52.

17 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), January 12, 2006, pp.7, 8, 30 & July 13, 2006, pp. 10-14. See also the presentations before the Committee of R.C. Wood and Jay Chambers, January 12, 2006.

18 Here's the way John Augenblick characterizes the process: "No one could manipulate the information to get a particular outcome although, obviously, all participants knew that identifying more resources would lead to higher cost." "Overview of the Professional Judgment Approach," Augenblick, Palaich, and Associates, Inc., July 13, 2006, point #11.

19 Sean Whaley, School funding talks closed, *Las Vegas Review-Journal*, March 29, 2006. See also Senator Beers' comments in Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), March 28, 2006, pp.52-55 & and the comments relevant to Augenblick's claim in the Minutes of June 2, 2006, p.56; & Jan.

20 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), June 2, 2006, pp.55,56.

21 Joe Enge, "Nevada's Adequacy Funding Setup or Christmas Comes in August," *The Watchdog Newsletter*, May 1, 2006 & "Biased Study and Creative Reporting," *The Watchdog Newsletter*, June 4, 2006.

22 APA, "Overview of the Professional Judgment Approach," July 13, 2006, point #8.

23 Indeed, studies by the economists Duncombe, Lukemeyer, and Yinger, demonstrate that simply altering the assumptions in an adequacy study in a manner that mimics the assumptions embedded in various state funding adequacy studies already completed, results in a 25 percent variation within the same estimation approach, and a 50 percent variation across estimation approaches. This is an abysmal reliability rate. See William Duncombe, Anna Luckemeyer, and John Yinger. "Education Finance Reform in New York: Calculating the Cost of a 'Sound Basic Education' in New York City," CPR Policy Brief, No. 28/2004, Center for Policy Research, Syracuse University, March.

24 R.C. Wood, Proposal to the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), December 15, 2005, p.4. Moreover, the 25 percent disparity came from two estimates made by a single contractor which, one could assume, tended to bring the estimates closer together than they might have been had they been made by two different contractors.

25 R.C. Wood, Proposal to the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), December 15, 2005, p.4.

26 R.C. Wood, Presentation to the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), January 12, 2006; the representative for the other losing bidder, "Mr. Chambers said …three approaches, taken individually, could give answers. Taken together, they could give better answers. He said there was no right answer to the question, 'What does it cost to provide and adequate education."

27 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), January 12, 2006, pp.8, 25.

28 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), January 12, 2006, pp.7, 8, 30.

29 Augenblick & Myers, Inc. *Calculation of the Cost of an Adequate Education in Maryland in 1999-2000 Using Two Different Analytic Approaches*, 2001.

30 Whaley, Sean. "Education Consultant: School funding talks closed" *Las Vegas Review-Journal*, March 29, 2006.

31 See relevant comments in Michael Weintz. "The Education Money Trap is Set for Nevada Taxpayers: Why does an 'adequate' education always have to mean more $$$?" *Latest News*, Las Vegas Chamber of Commerce, April 6, 2006. Available at [www.lvchamber.com/cgi/foxweb.dll/wlx/cs/wlxenews?cc=LVCC1&action=DISPLISTDET&docid=566] & Dave Stanford. "Hang on to your Wallets, Lock the Back Door, Education Funding ADEQUACY is Coming!" Letter to EdWatch Nevada, February 17, 2006.

32 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), June 2, 2006, pp.59,60 & July 13, 2006, pp.14-18. See also Ed Vogel, Lawmakers rip pay raise analysis, *Las Vegas Review-Journal*, June 3, 2006.

33 See www.coli.org/method.asp

34 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), July 13, 2006, Table 10.

35 Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), March 28, 2006, Tables 2, 4 & July 13, 2006, Tables X, IV-1, IV-10. The base and inflation-adjusted base figures are in table X. The percentage split for special needs students is in table 2. The percentage split for district size is in table IV-1. The cost estimates are summarized in table IV-10.

36 For a listing of meta-analyses of this literature, see Richard P. Phelps, The rich, robust research literature on testing's achievement benefits, Chapter 3 in R.P. Phelps, *Defending Standardized Testing*, Mahwah, NJ: Lawrence Erlbaum, 2005, p.73.

37 Studies correlating teacher test scores, usually on basic skills tests, tend to find increases in student achievement, but not increases in principals' evaluations of teachers, implying that principals' evaluations of teachers might not be correlated with student achievement

End notes, continued:

gains, and putting the most commonly-used method of evaluating teachers in the United States under some suspicion.

38 See, for example, Ed Vogel. "Teacher pay effect minimized." *Las Vegas Review-Journal*, October 26, 2005. See also, "Career-long Teacher Development Policies that Make Sense," *WestEd Knowledge Brief*.

39 See, for example, John E. Stone, Value-Added Assessment: An Accountability Revolution, Available at [http://www.edexcellence.net/foundation/publication/publication.cfm?id=15&pubsubid=51&doc=pdf]; James H. Strong & Pamela D. Tucker, *Teacher Evaluation and Student Achievement*, Education Consumers Clearinghouse [http://www.education-consumers.com/briefs/march2001.shtm];Theodore Hershberg, Value-Added Assessment and Systemic Reform, *Phi Delta Kappan*, December 2005, pp.276-283; Henry I. Braun, *Using Student Progress to Evaluate Teachers: A Primer on Value-Added Models*. Educational Testing Service, Policy Information Center, September 2005. [www.ets.org/research/pic] An excellent source for information on value-added models is Battelle for Kids, http://battelleforkids.com/.

40 Research focused on "where the money goes" when public school systems receive large and unanticipated windfalls of new state funding, shows that the new money is spent on "extras", such as the hiring of specialist teachers (e.g., for special education or ELL) or paraprofessionals, technology, or funding programs for at-risk youth. Little, if any, goes toward regular instructional programs, which are already set by contract. See, for example, A. Odden & S. Archibald, *Reallocating resources: How to boost student achievement without asking for more*. Thousand Oaks, CA: Corwin, 2001; R. Rothstein, *Where's the money going? Changes in the level and composition of education spending, 1991-96*. Washington, DC: Economic Policy Institute, 1997.

41 R.C. Wood, Presentation to the Committee on School Financing Adequacy, January 12, 2006. See also, Thomas Triplett. *Legal Issues and Constraints Affecting Finance Reform for Education and Related Services*. The Finance Project. November, 1995. For details on Nevada's school funding formula, see Legislative Counsel Bureau, Fiscal Analysis Division, *The Nevada Plan for School Finance: An Overview*, 2003 Legislative Session.

42 See, for example, the discussion in the Minutes of the Legislative Committee on School Financing Adequacy (A.C.R. 10, 2005 Legislative Session), March 28, 2006, pp.52-54.

43 *Quality Counts 2004*. Education Week. Bethesda, MD, p.118.

44 Indeed, Assemblyman Holcomb said as much in the Committee's January 12 meeting. For an example of the adequacy study—legal suit—court case dialectic in action, see "ISTA files funding lawsuit against State" at the Indiana State Teachers Association Web site: http://www.ista-in.org/sam.cfm?xnode=3688. APA completed a funding adequacy study for the Indiana State Teachers Association a few years ago.

45 Interestingly, R.C. Wood, who submitted one of the three proposals to conduct Nevada's adequacy study, himself recommends that state funding adequacy lawsuits by citing the effective schools literature. See R. Craig Wood & Jeffrey Maiden, Resource Allocations Patterns Within School Finance Litigation Strategies, Chapter 10 in Lawrence O. Picus & James L. Wattenbarger, Eds. *Where Does the Money Go?* Thousand Oaks, CA: Corwin Press, 1996.

46 See, for example, Thomas A. Downes, Evaluating the impact of school finance reform on the provision of public education: The California case, *National Tax Journal*, 45(4), 1992, December, pp.405-19 & School finance reform and school quality: Lessons from Vermont, in John Yinger, Ed., *Helping the children left behind: State aid and the pursuit of educational equity*, Cambridge, MA: MIT Press, pp.284-313. See also, Ann E. Flanagan & Sheila E. Murray, A decade of reform: The impact of school reform in Kentucky," pp.195-214; Julie B. Cullen & Susanna Loeb, School finance reform in Michigan: Evaluating Proposal A, pp.215-249; & William Duncombe & Jocelyn M. Johnston, The impacts of school finance reform in Kansas: Equity is in the eye of the beholder, pp.148-193, in John Yinger, Ed., *Helping the children left behind: State aid and the pursuit of educational equity*, Cambridge, MA: MIT Press.

47 On popular opinion regarding education funding, see Lisa Kim Bach, "Education should come first in funding, most in poll say." *Las Vegas Review-Journal*, April 11, 2006; "Most back more education funds." *Las Vegas Review-Journal*, May 20, 2006 & Peter D. Hart and Robert M. Teeter, *Equity and Adequacy: Americans Speak on Public School Funding*. Educational Testing Service. Available at http://www.ets.org/portal/site/ets/menuitem.c988ba0e5dd572bada20bc47c3921509/?vgnextoid=19acaf5e44df4010VgnVCM10000022f95190RCRD&vgnextchannel=8b5a253b164f4010VgnVCM10000022f95190RCRD

48 See, for example, Ed Vogel. "Spending increase for public schools passes committee." *Las Vegas Review-Journal*, May 26, 2005 & Sean Whaley. "Senate OKs educational excellence bill." *Las Vegas Review-Journal*, May 24, 2006.