NPRI Nevada Policy Research Institute

The Institute is a free-market think tank which finds private solutions for public problems facing Nevada, the West and the nation. NPRI has offices in Las Vegas, but scholars and writers from all over Nevada and the nation contribute to our mission.

Helene Denney
President
hd@npri.org

Sharon Rossi
Vice President for Operations
sr@npri.org

Steven Miller
Vice President for Policy
sm@npri.org

Carol Petersen
Executive Assistant
cp@npri.org

Joe Enge
Education Policy Analyst
enge@sbcglobal.net

Legislative Committee on Education (NRS 218.5352)

Testimony November 29, 2006

Joe Enge, Education Analyst Nevada Policy Research Institute

- Inadequacy of Adequacy Study
- The Urban Legend of All-Day Kindergarten

Thoroughly Inadequate: 'School Funding Adequacy' Study Filled with Evasions

by Richard P. Phelps, Ph.D.
August 2006 (Excerpts)

A native of St. Louis, Missouri, 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 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. He is the author of several books on testing.

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.

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. (Executive Summary)

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?

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. (Page 4)

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." (Page 5)

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. That is, they believe that none of them provide valid and reliable estimates of "adequacy," by any of the term's commonly-used definitions.

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." "Effective" in this case could mean "easier to do."

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.

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 valueadded 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. 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*. (Pages 6 & 7)

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.

Not Open to the Public
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."

Under pressure, APA consented to allow one individual to observe, Joe Enge of EdWatch Nevada and the Nevada Policy Research Institute. 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.

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. (Pages 7 & 8)

Wild Shots at a Barely Visible Target

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 caution 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. 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].

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.

"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."

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. 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.

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. (Pages 8 & 9)

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 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.
(Pages 9 & 10)

Changing Perspective from Neediness to Productivity
The most promising method for changing 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. Simply adding more money to the same mix is not likely to boost productivity; it might even lower it.

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. 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).
(Pages 12 & 13)

A Very Taxing Study
by Steven Miller NPRI

A 1995 study by the Nevada Policy Research Institute showed that state spending on public education in Nevada increased 194 percent from 1983 to 1992 while enrollment increased only 40 percent. Though this was a hefty per-pupil increase of an inflation-adjusted 54 percent for the 10-year period, it was accompanied by generally flat SAT scores for Nevada students.

"The lack of progress in Nevada's public schools, despite increasingly large amounts of spending," notes Tenney, "is likely associated with the nature of public schooling itself rather

than a problem associated with a lack of money. (Glen Tenney is an economist & NPRI senior research fellow)

"Economists William Mitchell and Randy Simmons go to the root of the problem," he continues, "by suggesting that public schooling combines students and parents as consumers who don't really buy, with teachers as producers who do not sell, and taxpayers as owners who do not control. Economic reasoning would only suggest that such a structure would be a recipe for disaster or mediocrity at best." **(NPRI Performance vs. Costs Charts)**

Conclusions:

- The APA Adequacy Study's inherent flaws make its figures and conclusions unusable.
- Nevada schools' lack of progress despite increased long-term educational spending is a result of the economic Law of Diminishing Returns.
- Systemic structural educational reforms rather than simply increasing spending are needed to increase student achievement; value-added assessment and merit pay, legislation to expand and support charter schools, and greater school choice options for Nevada's students and parents.

****

The Urban Legend of All-Day Kindergarten

Kansas Report
Summary of 2001 Research Full Day Kindergarten by Dr. Sherrill Martinez and Lue Ann Snider with the Planning and Research Department, Kansas State Department of Education. Their conclusion regarding studies nationwide:

Studies have also found some disadvantages of full-day kindergarten programs. First, some teachers and parents think more time with students equates with a more formal, academic curriculum. Such a curriculum is not age appropriate. Second, addition of full-day kindergarten is expensive, and the brain research indicates that the best use of additional education funds may be for preschool programs. Finally, a few longitudinal studies involving at-risk students show that gains made during the kindergarten year are lost by the end of the first grade year (Martinez, 1991).

In the past, problems with full-day kindergarten studies included the following: there was no comparison group, children were not followed past their kindergarten or first grade year, sample sizes were small, and the only outcomes studied were academic outcomes.

School District Report Refutes Benefits
The school district in Medway, Massachusetts looked into this issue and reported in its summary to parents in 2005 that, "The empirical evidence on all-day, half-day, and alternate-day programs suggest that there are no clear differential effects of kindergarten schedules on both academic achievement and classroom social behaviors. Therefore, Medway can consider financial, philosophical, and other factors in deciding kindergarten schedules."

Assessing Proposals for Preschool and Kindergarten:
Essential Information for Parents, Taxpayers, and Policymakers
by Darcy Olsen, President and CEO, Goldwater Institute, with research assistance from Jennifer Martin,
Ronald Reagan Fellow, Goldwater Institute
February 8, 2005
(The following excerpts are largely from this study)

The National Center for Education Statistics studies show a slight advantage for full-day kindergartners over half-day kindergartners as measured at the end of the kindergarten year. Critically, however, they show no differences in achievement between the two groups by the end of third grade.

According to the first national assessment of the skills and traits children possess as they enter kindergarten, U.S. kindergartners have a strong foundation. The high levels of preparedness call into question the notion that there is a widespread need for yet more government involvement in this arena.

Researchers Nicholas Zill and Jerry West explain,
Until recently, we have lacked systematic information about what children know and can do at school entry. The data that have been available depended on reports about children's skills from the parents of preschool children, rather than on direct assessments of the children themselves. With the launching of the U.S. Department of Education's Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 (ECLS-K) in the fall of 1998, however, measures of the knowledge, skill, health, and behavior of a large and nationally representative sample of American kindergartners are available.

The NCES assessment allows researchers to move beyond proxies into specific, verifiable skills. According to the first national assessment of the skills and traits children possess as they enter kindergarten, "America's Kindergartners," U.S. kindergartners have a strong foundation. In terms of concrete literacy development, 82 percent of children entering kindergarten have basic familiarity with print skills such as knowing that print reads left to right. In terms of concrete mathematics knowledge, 94 percent of children entering kindergarten pass mathematics proficiency level one, that is, reading numerals, recognizing shapes, and counting to 10.

This is why the National Center for Education Statistics Early Childhood Longitudinal (ECLS-K) study is so important. As noted earlier, the researchers assessed 22,000 children at kindergarten entry and most recently reported on those students through the third grade. The data set is the only one of its kind, giving researchers information on dozens of variables that impact student achievement, and, importantly, allowing them to control for the impact of kindergarten programs. The ECLS-K research shows the same pattern documented by hundreds of early education studies: children in full-day kindergarten are afforded a modest academic edge over children in half-day kindergarten when measured at the end of the kindergarten year. However, that initial edge completely disappears by third grade. At the end of the kindergarten year, the researchers find there is "little meaningful difference" on reading and math test scores between all-day and part-day kindergartners. They write, "In terms of kindergarten program type (i.e., all day or part day), there is little meaningful difference in the level of children's end-of-year reading and mathematics knowledge."

What is the difference? "On a reading scale that ranged from 0 to 72, the average kindergartner in a full-day program gained 10.6 points over the school year. For children in half-day kindergarten programs, the average gain was 9.4 points."48 Final reading scores were 32.1 and 31.3, respectively. The findings in mathematics are parallel. The difference is modest, and all the more modest considering full-day students spend twice as much time in school as their half-day peers. Importantly, the "little meaningful difference" observed at the end of the kindergarten year no longer exists by third grade. By the end of third grade, the researchers no longer detect a difference between students who attended part-day or full-day programs. They write, "This report did not detect any substantive differences in children's third-grade achievement relative to the type of kindergarten program (full-day vs. half-day) they attended."50 The finding holds across all subject matters tested. "Third-grade reading, mathematics, and science achievement did not differ substantively by children's sex or kindergarten program type.

The NCES reports document on a large scale the piecemeal findings on early education that have been trickling in for years: in the short-term, more early education may confer more gains than lesser amounts of early education, but over time, those advantages are not sustained. Unless or until the elementary and secondary school system is improved, it is unlikely that preschool or kindergarten will lead to a measurable improvement in school achievement.

What Impact Do Preschool and Kindergarten Have on Achievement?
A Historical Overview

The NCES findings may be less surprising in historical context. From 1965 to the present day, the United States has undergone a sea change in formal early education. Preschool, then uncommon, is now the mode. **(Figure 1 on Page 13, Olsen 1)** Only five percent of three-year-olds attended preschool in 1965; today, 39 percent attend. Sixteen percent of four-year-olds attended preschool in 1965; today, that figure is 66 percent. For five-year-olds, kindergarten has become almost universal. Despite the widespread use of formal early education programs, student achievement has shown little to no improvement. **(Figure 2 on Page 14, Olsen 1)** For instance, fourth-grade reading, science, and math scores on the National Assessment of Educational Progress (NAEP) have been little better than stagnant since 1971, 1977, and 1978, respectively.

As noted author and education researcher Andrew Coulson reports, “Student achievement has stagnated or fallen in most subjects since 1970…That is the verdict of the five most reliable sources of evidence: the National Assessment of Educational Progress (NAEP), the International Evaluation of Education Achievement (IEA), the Young Adult Literacy Survey (YALS), the National Adult Literacy Survey (NALS), and the International Adult Literacy Survey (IALS).”

Although the relationship between inputs and outcomes is more complicated than this linear analysis suggests, if the proponents’ arguments were correct, we should expect to see at least some relationship between the increased enrollment in early education programs and student achievement. This is particularly true when the states have, over the same period of time, more than tripled spending on education, increased teacher salaries, and reduced class sizes.

Certainly many factors contribute to student learning, but the lack of any apparent relationship between increased enrollment in early education programs and later student achievement suggests more formal early education is unlikely to improve student achievement.

Developmentally Hitting a Brick Wall

Linda Plevyak, assistant professor of early childhood education at the University of Cincinnati, said the pressure in the upper primary grades to perform well on standardized tests is trickling down to kindergarten and preschool.

"Unfortunately, we're challenging developmentally appropriate practice," Plevyak said. "When we look at a child's chronological age, they're 5-year-olds and entering kindergarten. We can't go beyond a certain level before hitting a brick wall."

"When you're trying to push children beyond what they can physically and emotionally do, we're going to have some real struggles," she added. "We're requiring kids to sit for longer periods of time, and they're having homework in kindergarten. I think there's going to be a breaking point." (Source: Half-day kindergarten giving way to all-day by Cindy Kranz *The Cincinnati Enquirer*, March 17, 2003)

How Do U.S. Children Perform?
An International Examination

If early education programs were essential building blocks for later school success, we would expect European students to have a stronger showing than U.S. students on international tests, particularly in the early elementary years. However, test scores reveal that U.S. students

routinely outperform their international counterparts in reading, math, and science in fourth-grade—the earliest year for which comparative test scores are available.

(Figure 3 Page 15, Olsen 1) shows that U.S. fourth graders demonstrate significantly better reading literacy skills than their French peers. With a score of 542, U.S. fourth graders also perform significantly better than the international average of 500, and outperform their counterparts in 26 of the 35 countries participating in the literacy exam, including Germany and Italy, which have enrollment rates similar to France. The top performance of U.S. readers was documented in an earlier version of the 2001 exam. On the 1991 version, U.S. fourth graders surpassed students in France, East Germany, West Germany, and Italy with significant margins.

Test data from the Third International Mathematics and Science Study show U.S. fourth graders also have above-average math scores, and their science performance is third only to South Korea and Japan.60 U.S. fourth graders earned a score of 545 in mathematics, performing significantly better than the international average of 529, and surpassing their counterparts in 14 out of 26 participating countries. In science, U.S. fourth graders scored 565, far above the international average of 524.

While U.S. fourth graders are "A" students on the international curve, that advantage does not last. By eighth grade, U.S. student performance is slipping, and test performance is mediocre. As David Hoff reported for *Education Week*, "In 1995, the nation's fourth graders aced international mathematics and science tests. By the time they reached the 8th grade in 1999, though, they had become little better than C students on a global curve…" A similar decline occurs in reading. **(Figure 4 Page 17, Olson 1)** shows U.S. fourth graders score higher than 70 percent of their international peers while U.S. eighth graders perform little better than the international average.

Student performance continues declining, and by twelfth grade U.S. seniors are "D" students on the international scale. Out of 21 countries tested in math and science literacy, U.S. twelfth graders performed better than students in only three countries— Lithuania, Cyprus, and South Africa. As the U.S. Department of Education describes it, "U.S. students performed relatively well at the fourth-grade level, about average at the eighth-grade level, and below average at the twelfth-grade level." **(Figure 5 Page 17 & Figure 6 Page 18, Olsen 1)**

Are these national and international academic comparisons applicable to Nevada?
Given Nevada's scores are close, but a little below the national average for the 4th and 8th grades, The Goldwater Institute's study and findings are applicable to Nevada.

Subject	Grade	Year	Scale Score		Achievement Level		
			State Avg.	[Nat. Avg.]*	Percent at or Above		
					Basic[1]	Proficient	Advanced
Mathematics (scale: 0-500)	4	1996[n]	218	[222]	57	14	1
		2000	220	[224]	60	16	1
		2003	228	[234]	69	23	1
		2005	230	[237]	72	26	3
	8	2000	265	[272]	55	18	2
		2003	268	[276]	59	20	3
		2005	270	[278]	60	21	3
Reading (scale: 0-500)	4	1998	206	[213]	51	20	4
		2002	209	[217]	54	21	3
		2003	207	[216]	52	20	3
		2005	207	[217]	52	21	4
	8	1998	258	[261]	70	23	1
		2002	251	[263]	62	19	1
		2003	252	[261]	63	21	1
		2005	253	[260]	63	22	1
Science (scale: 0-300)	4	2000[n]	142	[148]	58	19	1
		2005	140	[149]	55	17	1
	8	2000[n]	141	[148]	52	22	2
		2005	138	[147]	48	19	1
Writing (scale: 0-300)	4	2002	145	[153]	82	18	1
	8	1998	140	[148]	77	17	0
		2002	137	[152]	75	16	1

* Includes public schools only
[n] Accommodations were not permitted for this assessment
[1] Students who scored below the Basic achievement level are not included in this table.

(Source: NDOE, Nevada Annual Reports of Accountability)

Conclusion:
Why Expanding Early Childhood Education (All-Day Kindergarten & Preschool) is Not the Answer

- Studies purporting to support all-day kindergarten consistently do not address or measure "fadeout", the short-lived academic benefits that long-term studies show disappearing in a few years. The recent Clark County School District kindergarten study measuring only 1 year is a prime example.
- Fourth grade reading, math, and science scores have remained flat over the decades despite the long-term historical expansion of preschool and kindergarten attendance.
- The consistent and superior performance of American 4th graders in international comparisons clearly demonstrates the real problems are not in early childhood education, rather in the middle school and high school level systems as American 8th and 12th graders international academic comparisons markedly decline.
- Given valid research does not support all-day kindergarten, the push for it can only be explained as being politically motivated. Research does not support the often repeated and unchallenged statements in the media "all research shows" all-day kindergarten works or will make any impact on high school drop out rates.