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Review of Final Recommendations from Nevada School Finance Study

Presentation to Nevada Commission
on School Funding

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Presentation Topics

- Review of recommendations from APA's study
 - Base
 - Adjustments for at-risk, English Learners and special education students
 - District size
 - Necessarily small schools
 - CWI
 - Other adjustments
- Areas that the Commission could further address
- Q&A

Developing Alternatives for Components of a New Funding Formula

- To determine the appropriate base amount and adjustments for a new weighted student formula, the study team considered:
 - Current funding practices in Nevada and other states.
 - A national inventory, the 2012 AIR study, and the study team’s updated analysis of current student need adjustments in comparison states.
 - The body of adequacy findings from the current study and prior studies conducted in Nevada:
 - The current study which used the PJ and EB approaches.
 - The 2006 study conducted by APA for the legislature that used the successful schools and PJ approaches.
 - The 2015 APA PJ study for the Lincy Institute at UNLV.
 - Results of adequacy studies conducted nationally over the past 10 years.

Base Cost Recommendations Continued

- Compared results from all cost-based Nevada adequacy data sources against current.
- Results from three accepted approaches to adequacy with two different performance targets:
 - The **Evidence-based (EB)** approach reviews available research and whole school reform models to identify the resources needed to ensure all students can meet all state standards and performance expectations.
 - The **Professional Judgment (PJ)** approach relies on the experience and expertise of Nevada educators to identify the resources needed to meet the same benchmark above.

Base Cost Recommendations Continued

- The **Successful Schools** approach examines the expenditure data of schools that are performing better than their peers to determine an adequate level of resources to achieve that performance target.
 - The benchmark for the 2006 successful schools was meeting the NCLB AYP proficiency targets for 2008-09. In most test subject areas, these targets required just over half of all students to be proficient.
 - After the 2018 study was completed, APA worked with NDE to calculate an updated successful schools figure.
 - Using current state performance standards about 50 schools were identified as meeting updated successful schools benchmarks.
 - Examined 2018-19 expenditure information for the identified successful schools to calculate a new successful schools figure.

Study Base Cost Recommendations

	Basic Support Guarantee (16-17)	2006 Study Successful Schools	2006 Study PJ	2015/2018 PJ	2018 EB	2018 Successful Schools
Prior Study Figure						
Data Year	FY17	FY04	FY04	FY13	FY17	FY18
Inflation Factor	-	1.29	1.29	1.08	-	-
2016-17 Figure (Inflated)	\$5,387	\$5,988	\$9,289	\$9,238	\$9,983	\$6,197

Base figures do not include federal funds, transportation, food service, adult education and capital.

Study Base Cost Recommendations Continued

- APA recommended two base costs be used:
 - A successful schools base figure as a starting point
 - The draft recommendations used the 2006 successful schools figure of \$5,988
 - The final recommendations used the updated 2018 figure of \$6,197
 - A full adequacy base figure of \$9,238 as a funding target
 - Figure is the low end of the range of results from the 2006 and 2015/2018 PJ and 2018 EB approaches.
 - Could be funded over time.
- Both alternatives are cost-based but represent different performance benchmarks (current vs. future targets) and overall learning environments.

Study Student Need Adjustment Recommendations

- Weights for Nevada were presented in two ways:
 - Against the full adequacy base of each study, or
 - Against the starting base amount recommended
- For results from other states, the weight shown was against that state's base amount (current or adequacy recommendation).
- Weights from adequacy studies represent the total resource need from all available funding sources- state, local and federal.
 - To determine the weight to be included in a new funding system in Nevada, the weight would need to be adjusted to represent the resource level needed from state and local sources, knowing that federal funding would be available separately.

Study Student Need Adjustment Recommendations: *At-Risk*

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	.35	.35	.20-.29	.31-.46
Scaled to Apply to Base of \$5,988	.54	.54	.31-.45	.52-.77
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: .22 (average)				
National Adequacy Comparison, Weight Against Adequate Base: .35 (average)				

- The study team recommended a weight of .30 (does not include Title I funds).
- The weight generates \$2,771 per at-risk student when applied to the full adequacy base of \$9,238. This would provide for interventionists, additional social emotional support staff, supplies and materials, and extended learning time.
- The weight of .30 would generate \$1,796 when applied to the lower base of \$5,988 or a scaled weight of .46 would be needed to still generate \$2,771.

Student Need Adjustment Recommendations: *English Learners*

Nevada Studies

	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	0.47	0.41	.57 (average)	.40-.55
Scaled to Apply to Base of \$5,988	0.73	0.63	.88	.67-.92
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: .44 (average)				
National Adequacy Comparison, Weight Against Adequate Base: .49 (average)				

- The study team recommended a weight of .50 for the state funding formula.
- Applied against the full adequacy base, the weight would generate \$4,619, allowing for differentiated language support based upon need (ranging from separate instruction for newcomers to co-teaching and support in the general education classroom), supplies and materials, and extended learning time.
- Against the lower base it would generate \$2,994, or a scaled weight would be .77.
- Other considerations: using a three-tier weight based on WIDA results, overlap of resources from at-risk adjustment.

Student Need Adjustment Recommendations: *Special Education*

Nevada Studies

	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	1.2	1.1	1.4	.70 (mild and mod)
Scaled to Apply to Base of \$5,988	1.9	1.7	2.16	1.17 (mild and mod)
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: .9 (average)				
National Adequacy Comparison, Weight Against Adequate Base: 1.1 (average)				

- The study team recommended a 1.1 full adequacy weight (IDEA funds being separate) applied to all special education students, which would generate \$10,162 per special education student applied to the adequacy base and \$6,587 per student applied to the lower base. The scaled weight would need to be 1.9.
 - Prior to implementing a relative weight for special education, a comparison against current expenditures were need to be made to ensure that funding does not drop below current and violate federal maintenance of effort and fiscal support requirements.
- The state could also consider a three-tier funding model for special education with differentiated weights by student need (using the 2018 PJ results) or providing a weight for mild and moderate and continuing to fund severe separately as a categorical (2018 EB recommendation).

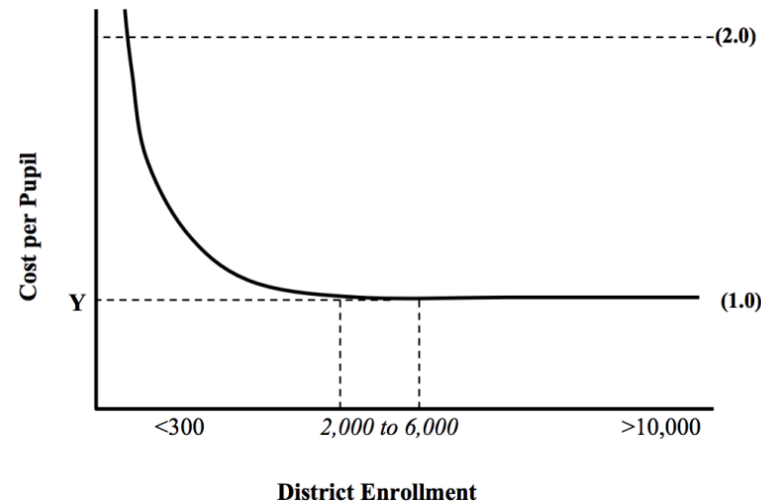
Student Need Adjustment Recommendations: *Gifted and Talented*

Nevada Studies				
	2006 Study PJ	2015 PJ	2018 PJ	2018 EB
Applied to Each Study's Adequacy Base	-	-	-	Less than 0.01
Scaled to Apply to Base of \$5,988	-	-	-	0.01
Comparison to Other States/Studies				
AIR Study/Updated Analysis, Weight in Each State Against their Base: weights range from .02 to .60 (if the student has an IEP).				
National Adequacy Comparison: not available				

- The PJ panels did not recommend additional resources for gifted on a full adequacy base.
- However, if a lower base was used the study team recommended using a weight of .05 for gifted and talented (about \$300 per student) based upon information from comparison states.

District Size

- The study team recommended that a new funding formula include a district size adjustment to account for different economies of scale in districts.
- The study team developed a size adjustment factor based upon:
 - Results of the current study and 2006 adequacy study, both based upon Nevada PJ and EB approach information, combined with school finance research presented in the 2012 AIR report.
- School finance research depicts the relationship between size and cost as a J-curve:



District Size Continued

- The J-curve relationship is consistent with the results of the 2018 EB and PJ studies, that while based on two different district sizes (3,900 for EB, and 50,000 for PJ), but were similar in terms of per-pupil costs.
- The 2006 study provided smaller size data points- a minimum at 50 students and a smaller data point at 780 students- that also were consistent with the J-curve seen in research.
- These data points were used to develop the following formula (with the \$9,238 base used as the floor of 1.0):

For districts above 3,900 students:

$$\text{size adjustment factor} = (-.000001735 * \text{enrollment}) + 1.0868$$

For districts below 3900 students:

$$\text{size adjustment factor} = (-0.281 * \ln(\text{enrollment})) + 3.4$$

District Size Continued

- This formula was used to develop a size factor to apply to any base amount, shown below at different size points:

District Enrollment	Size Adjustment Factor
50	2.30
100	2.11
250	1.85
500	1.65
1,000	1.46
2,000	1.26
3,000	1.15
4,000	1.08
7,500	1.00
10,000	1.00
50,000	1.00
300,000	1.00

- The study team recommended the size factor for each district be applied to the base separately from any other adjustments.

Regional Cost Adjustments

- Options:
 - Cost of Living Index (CLI)
 - Hedonic Wage Index (HWI)
 - Comparable Wage Index (CWI)
- The study team, supported by current school finance research, believes that the CWI is the best metric to use in looking at the differential in costs facing school districts related to personnel, as long as other district characteristics, such as size, are being taken into account elsewhere.

Comparative Wage Index (CWI)

- Benefits of the CWI:
 - Uses Census Bureau data so easy to update.
 - Calculated by measuring the variation in non-teacher wages across localities.
 - By examining the regional wage differentials of a large sample of workers who have characteristics similar to teachers, the CWI implicitly accounts for a wide range of factors that influence the salary levels necessary to attract teachers to live and work in particular districts or regions, such as cost of living and desirability of place, including climate, cultural amenities, safety, commute times, and recreational opportunities.
 - Independent of current district teacher salary decisions.

Comparative Wage Index (CWI)

- The most recent national data on CWI comes from Lori Taylor of Texas A&M University and has been updated through 2013. Every district in the country and each state has an identified CWI figure.
- A CWI can be calculated by using raw figures to then index to the lowest cost counties, or to the statewide average (putting the raw figures in the context of a state).
 - The study team would recommend using a three-year average to account for fluctuations in data.
 - Following table shows three-year average of each option.

Comparative Wage Index (CWI) Continued

	Raw Figure	Indexed to Lowest Cost Counties	Indexed to Statewide Average
Clark	1.56	1.16	1.03
Churchill	1.35	1.00	0.89
Elko	1.35	1.00	0.89
Esmeralda	1.35	1.00	0.89
Eureka	1.35	1.00	0.89
Humboldt	1.35	1.00	0.89
Lander	1.35	1.00	0.89
Lincoln	1.35	1.00	0.89
Mineral	1.35	1.00	0.89
Nye	1.35	1.00	0.89
Pershing	1.35	1.00	0.89
White Pine	1.35	1.00	0.89
Douglas	1.49	1.05	0.93
Lyon	1.42	1.05	0.93
Carson City	1.42	1.05	0.93
Storey	1.45	1.07	0.95
Washoe	1.45	1.07	0.95

Comparative Wage Index (CWI) Continued

- The study team examined the impact of a Comparative Wage Index (CWI) adjustment
- Two possibilities: indexed to lowest cost counties, indexed to statewide average
 - The successful schools approach examines schools across the state and full adequacy figure is based on statewide averages, indicating to the study team that a CWI based on statewide average would be the better of the two approaches
 - However, study team was concerned that the CWI Indexed to statewide average negates impact of the size adjustment for many districts.
 - All but Clark County have a negative CWI factor
 - Based upon available data, the study team recommended the state apply the CWI Indexed to Statewide Average only when above 1.0

Necessarily Small Schools Adjustment

- Finally, the study team recommended that the state adopt one of several approaches for compensating for small and/or isolated schools
- Each of these approaches is currently used in one or more states and could be adapted for use in Nevada:
 - Student weights- Arizona
 - Student count- Minnesota
 - Minimum staffing/funding- Wyoming, California
- The study team modeled Wyoming's approach in the study's final recommendations.

Implementation Scenarios

- **Full Adequacy:** implements all identified resource levels as adequate, including the base and adjustments for student need
 - Base: Adequacy; Weights: 0.30 for at-risk, 0.50 for EL, and 1.1 for special education
- **Scaled Weights:** uses the successful base and a set of scaled weights to generate the same dollar figure per need student, as was generated in the full adequacy scenario.
 - Base: Successful Schools; Weights: 0.46 for at-risk, 0.77 for EL, 1.7 for special education, and 0.05 for gifted
 - This approach would target additional resources towards at-risk, EL, special education, and gifted and talented students first.

Implementation Scenarios

- **Relative Weights:** use the successful base and then apply the full adequacy weights to that amount.
 - Base: Successful Schools; Weights: 0.30 for at-risk, 0.50 for EL, and 1.1 for special education
 - Results in a lower level of resource generated, but at the same relative level in terms of the base.
 - Though this change is below an adequacy level for the special needs students, it would: 1) still shift towards a more student-centered funding approach, 2) provide targeted dollars to all eligible students, and 3) allow resources for the base and special needs funding to grow similarly over time.

Recommended Implementation Scenario

- The study team recommended using the 2018 Successful Schools base cost of \$6,197 as the basis of a new funding approach
 - The state should still use the full adequacy base figure of \$9,238 as a future funding target, so as state performance expectations increase over time, additional resources should also be phased in.
- Use relative weights for student need

2018 Successful Schools Base	\$6,197
Student Need Weights	
At-Risk	0.30 (\$1,859)
English Learners	0.50 (\$3,099)
Special Education	1.1 (\$6,817)
Gifted and Talented	0.05 (\$310)

Additional Adjustments

- Include a Hold Harmless provision and an External Cost adjustment
 - Hold harmless provision would ensure that districts do not receive less funding than they received prior to implementing the new funding approach for a specific period of time
 - External cost adjustment should be included to address:
 - Inflation (at minimum)
 - Changes over time for other cost pressures districts face such as materials, utilities or health care

Areas the Commission Could Further Address

- The study's recommendations for the following adjustments were based upon older information or not Nevada specific:
 - District Size
 - Could examine current district-level expenditures in Nevada to see the current relationship between size and expenditures in the state
 - Could convene additional professional judgement panels at different school size points
 - Could review and model approaches in other states
 - CWI
 - Could make more Nevada specific CWI by updating with different professions
 - Use an alternative regional cost adjustment
 - Necessarily Small Schools Adjustment
 - Similar to district size, could examine current school-level expenditures or convene professional judgement panels to address
 - Could model approaches in other states

Questions?