EXHIBIT D1

Recommendations

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Presentation to the Senate Committee on Education
and the House Committee on Education
Little Rock, Arkansas
November 9, 2020

Presentation Overview

- Presenting a set of recommendations based on various analyses conducted by the study team over the course of the study including:
  - Fiscal and performance data analysis using data from ADE and BLR
  - District survey of current resource use and practices
  - Case studies
  - Literature reviews
    - National research
    - Current practices and adequacy studies in other states
    - Previous Arkansas studies
  - Stakeholder engagement
    - Educator panels and online survey
  - Additional quantitative and qualitative work
- For each recommendation, the study team identifies the recommendation as well as the related context and supporting evidence

Context for Recommendations

- The study team recognizes it is the legislature's role to determine adequacy and that the state does not have unlimited resources
- Further, the study team has not been asked to establish adequacy levels
  - As such, the recommendations do not identify specific resource targets, although several are framed around resources levels as related to the research that has been completed
- Recommendations were developed in areas where the body of evidence across all the study teams' work identified the need for specific consideration of an item

Systems Recommendations

Recommendation 1:

The state should consider adopting a hybrid approach to reviewing adequacy

Recommendation 1:
Hybrid Approach

- The state meets its Lake View obligations by having "constant study, review, and adjustment" to the funding system
  - Since the early 2000s, the state has implemented both constant study and review through three adequacy studies conducted by an outside firm and the adequacy work of BLR
    - The two-year cycle of studying all aspects of the matrix conducted by BLR allows the state to meet the Continuing Adequacy Evaluation Act of 2004
  - Though there have been numerous adjustments made to the matrix since implementation, the main staffing parameters of the matrix have changed little over time

Recommendation 1:
Hybrid Approach

- The study team recommends that in addition to the current two-year adequacy review cycle, the state should conduct a larger-scale study utilizing at least two adequacy approaches
  - Conduct this study at a regular interval set every six to 10 years
  - Focus on all aspects of funding, including (but not limited to):
    - Base resources
    - Adjustments for student characteristics (such as being low-income/economically disadvantaged, an English Learner (EL), or in special education)
    - Adjustments for district characteristics (such as size or regional cost differences)

Recommendation 1:
Hybrid Approach

- Possible approaches:
  - The evidence-based approach can be used to examine the base cost and adjustments for student characteristics
  - The professional judgment and/or cost function approaches could be utilized to examine all aspects of the formula (base cost and adjustments for both student and district characteristics)
  - The successful schools approach could be utilized to examine the base cost amount
- The study team suggests that at least in the near term, a resource model, based on either the evidence-based or professional judgement approach, be kept in place, as the history for review has been based on the ability to examine an explicit resource base

Recommendation 1:
Hybrid Approach

- The implementation of any adequacy approaches should be related to specific outcome goals for students
  - Various levels of student performance could be examined using either the cost function or successful schools approaches, allowing the Committees to understand the difference in resource needs for various outcome levels
- The study team believes a larger scale, multi-mode review would benefit Arkansas by allowing the state to align resource allocation with performance gaps and funding needs identified in this study
  - Differences between student groups
  - Differences based upon district size

Recommendation 1:
Hybrid Approach

- **Performance gaps:** the detailed data analysis showed that student groups, such as economically disadvantaged, ELs, and special education, had lower outcomes than other students
  - Controled for student and district characteristics, including student race and ethnicity, average teacher experience, average class size, millage rates, population density, and proximity to urbanized areas

Student Population	Proficiency Rate	Comparison Group Proficiency Rate	Gap
ELA			
Economically Disadvantaged Students	34.6%	63.1% (Non-Economically Disadvantaged Students)	28.5%
EL Students	13.8%	47.1% (Non-EL Students)	33.3%
Special Education Students	7.2%	49.8% (Non-SPED students)	42.6%
Under-Represented Minority (URM) Students	33.0%	55.4% (White & Asian Students)	22.4%
Math			
Economically Disadvantaged Students	38.2%	64.6% (Non-Economically Disadvantaged Students)	26.4%
EL Students	22.6%	49.6% (Non-EL Students)	27.0%
Special Education Students	12.2%	52.5% (Non-SPED students)	40.3%
Under-Represented Minority (URM) Students	32.3%	54.3% (White & Asian Students)	22.0%

Recommendation 1:
Hybrid Approach

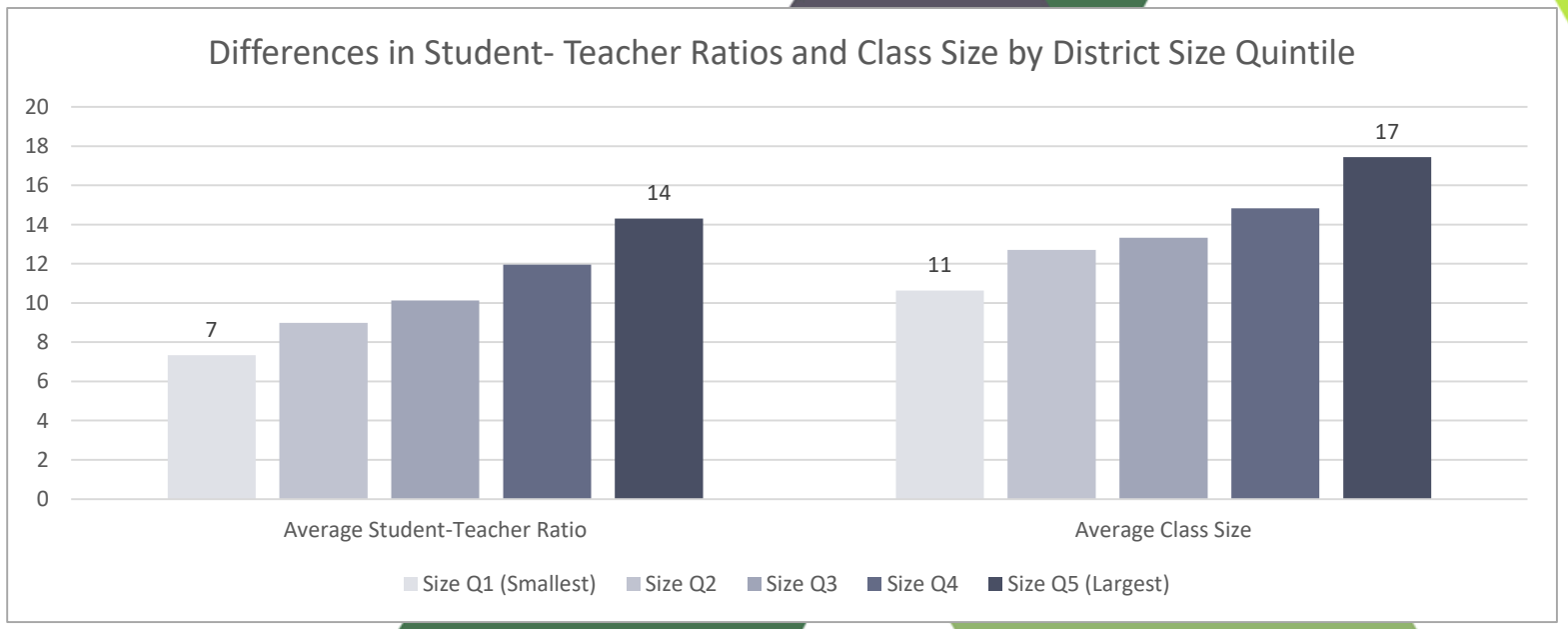
- **Performance gaps (continued):** stakeholder engagement and BLR data analysis also indicate that districts struggle to provide the resources needed for these student groups
  - Districts reported needing to use funds from other sources to cover the costs of special education and EL services
  - Often, Enhanced Student Achievement (ESA) dollars are utilized to cover the costs of both special education and EL services (and to address other areas that support all students), limiting the use of ESA resources for economically disadvantaged students

Recommendation 1:
Hybrid Approach

- **Differences due to district size:** the current matrix does not differentiate resources by district size, resulting in some districts being much more efficient than others and therefore better able to leverage their funding, while smaller districts lack this ability
  - Smaller districts reported facing difficulties resourcing schools at the current matrix level, often having to redirect resources to meet classroom staffing needs (to meet class size requirements) or to provide a minimum FTE level
  - The differences in economies of scale between larger and smaller districts is readily apparent when looking at average student-to-teacher ratios and average class sizes

Recommendation 1:
Hybrid Approach

- **Differences due to district size (continued):**
  - Smaller districts have lower student-teacher ratios and average class sizes, but the matrix does not differentiate resources for these districts based upon size
    - Note, these figures include all teachers in schools



Recommendation 1:
Hybrid Approach

- **Differences due to district size (continued):**
  - Smaller districts also have lower average classroom teacher salaries, as do rural districts
    - This is likely in part due to differences in teacher experience and education, but rural and urban/suburban districts were similar in terms of teacher workforce

By Size Quintile	Average Classroom Teachers Salaries
Size Q1 (smallest)	$42,227
Size Q2	$43,792
Size Q3	$44,650
Size Q4	$46,963
Size Q5 (largest)	$51,395
By Locale	
Rural	$44,992
Urban/Suburban	$52,149

Recommendation 1:
Hybrid Approach

- A multi-approach study would allow the state to examine the costs for all students with an emphasis on special needs populations and identifying the differences in costs faced by districts due to district size and locale
  - Could include developing a district size adjustment that provides higher levels of per-pupil funding to address the economies of scale issues in smaller district settings.
    - Not just for isolated settings but for all smaller districts

Recommendation 2:

Establish a system to monitor and ensure teacher quality is commensurate across schools. Create an incentive structure to increase the number of highly qualified teachers serving students at high need schools and small schools.

Recommendation 2:

Addressing Teacher Quality

- Access to qualified educators varies across the state, including in districts with higher concentrations of low-income students and in smaller districts
- Additionally, an analysis of teacher workforce data at the school level indicates that teaching staff at schools serving larger low-income, and particularly more impoverished student populations, as defined by those that qualify for free lunch or that are identified through direct certification, are less qualified than teachers at more affluent schools
  - This presents a clear issue of equity and access to quality instruction

Recommendation 2:
Addressing Teacher Quality

- **Differences in teacher quality by school need:** as the percentage of students directly certified for free and reduced-price lunch increases, the percentage of teachers: 1) with a master's degree, and 2) who are fully certified in the subject area they teach both decrease

Deciles: % Free Lunch/Direct Certification	% of Teachers with a Master's Degree	% of Teachers Fully Certified for their Positions
1st (lowest)	45%	98%
2nd	41%	98%
3rd	37%	98%
4th	39%	97%
5th	35%	98%
6th	37%	96%
7th	40%	97%
8th	38%	97%
9th	37%	93%
10th (highest)	32%	91%

Recommendation 2:
Addressing Teacher Quality

- **Differences in teacher quality by school size:** teacher quality decreased as school size decreased

Deciles: School Enrollment	% of Teachers with a Master's Degree	% of Teachers Fully Certified for their Positions
1st (smallest)	28%	89%
2nd	29%	91%
3rd	34%	94%
4th	36%	97%
5th	33%	98%
6th	36%	98%
7th	38%	97%
8th	41%	97%
9th	40%	96%
10th (largest)	44%	98%

- There is a moderate negative correlation between teacher salaries and school enrollment size and percentage of economically disadvantaged students
- Methods that could be explored to address these disparities include teacher incentives and improving the teacher preparation pipeline

Recommendation 3:

Develop a legislative task force to investigate and address the out-of-school factors that inhibit performance for high need students within the state.

Recommendation 3:
Task Force

- Compared to schools with low concentrations of economically disadvantaged students within the state, schools with the highest concentrations of economically disadvantaged students are:
  - Smaller and more remote
  - Graduate fewer students
  - Have lower proficiency rates in English and math
  - Serve significantly fewer white students
- The differences in students' performance levels are not indicative of student abilities but rather suggest differences in instructional needs and required supports, as well as external factors, such as generational poverty and systemic issues like racism and classism

Recommendation 3:
Task Force

- Much of the feedback that the study team heard suggested that economically disadvantaged students come to school with a variety of physical and emotional needs that must be addressed before their educational needs can be addressed
  - Given that many of these issues are not solely educational and likely represent a nexus of agencies and funding sources, the study team proposes that the legislature examine the ways educational disparities are systematically reinforced in the broader community through a legislative task force

Recommendation 3:
Task Force

- Task force could be led by members of the Education Committees but also include:
  - Legislators on other relevant committees
  - Teacher, administrative, and non-certified representatives
  - ADE staff
  - Stakeholders from organizations involved in providing wrap-around services for students/families
- This task force should be guided by the prevailing literature, with a focus on addressing the in- and out-of-school factors that can impact and/or inhibit student success, such as:
  - Access of low-income students to before- and after-school enrichment activities
  - Availability of mental health services
  - Access to internet and technology in low-income communities
  - Availability of services offered to students' families, e.g., referrals, adult education, and health care services

Recommendation 4:

The state should adopt a Career Readiness definition that includes: 1) core academic knowledge and skills, 2) capabilities, 3) behavior skills and dispositions, and 4) postsecondary preparation and planning. The study team recommends that the definition be focused on career readiness for all students, as college is just one of several pathways to a career.

Recommendation 4:
Career Readiness Definition

- **Recommended Career Readiness definition:**

  Upon graduation, Arkansas students should demonstrate career readiness — each student should leave high school ready to take the next steps towards a career regardless of whether that is college (2- or 4-year), a technical program, military service, or an entry-level career position.

  More specifically, an Arkansas student who is career ready will have:

  - Gained core academic knowledge in mathematics, science, and English language arts to allow them to successfully complete credit-bearing, first-year courses at a postsecondary institution.
  - Demonstrated capabilities such as communication, critical thinking, collaborative problem solving, and time management, as well as information and technology skills.
  - Developed behavioral skills and dispositions such as dependability, perseverance, working effectively with others, adapting, and managing stress.
  - Developed financial literacy.

Recommendation 4:
Career Readiness Definition

- **Recommended Career Readiness definition (continued):**

All Arkansas students should be guided in career exploration, planning, and decision-making throughout their K-12 education to allow them to successfully navigate their chosen career path. This includes knowledge of careers, industries, and postsecondary education and training opportunities, identification of individual interests and abilities, and development of a personalized postsecondary plan with the concrete steps that need to be taken to enter a specific career field after graduation.

Further, students should have had opportunities to participate in advanced, concurrent enrollment; career and technical education (CTE) or other career-focused courses; internships; and apprenticeships to demonstrate they are career ready.

Recommendation 4:

Career Readiness Definition

- Within the state's Comprehensive Testing Assessment Accountability Program statute, college and career readiness is defined in a limited manner and focused on students "successfully completing credit-bearing, first-year courses at a postsecondary institution; and embarking on a chosen career."
  - This existing definition has been incorporated and expanded on in the recommended definition
- An actionable definition like the one proposed that includes specific academic knowledge, skills, and traits that students are expected to have in order to be college and career ready is well supported by national research and policy recommendations from organizations such as ACT and the federally funded College and Career Readiness and Success Center

Recommendation 4:

Career Readiness Definition

- Adopting this (or a similar) definition would also place Arkansas among the other roughly 15 states that include capabilities, behavior skills, and college and career preparation knowledge and skills in their definitions
- Educators and community members who participated in stakeholder engagement strongly supported a definition that included the above elements, with particularly strong support for the inclusion of “soft skills,” like the noted capabilities and behavioral skills and dispositions

Resource Matrix Components

Recommendation 5:

The Committees should reconsider current matrix resource levels in the areas where the body of evidence is most consistent.

Recommendation 5:

Reconsidering Matrix Resource Levels

- The study team does not offer a specific recommendation for each area of the matrix but instead has included recommendations for the matrix areas with the most consistent evidence regarding resource levels from various study sources:
  - Rec. 5a: K-3 Teacher Ratios
  - Rec. 5b: Non-Core Teacher Percentage at High School
  - Rec. 5c: Secretary
  - Rec. 5d: Librarian/ Media Specialist
  - Rec. 5e: Assistant Principal
  - Rec. 5f: Student Mental Health and School Safety/Security
  - Rec. 5g: Instructional Materials

Recommendation 5:
Reconsidering Matrix Resource Levels

- **Recommendation 5a: The Committees should reconsider the current student-to-teacher funding ratios for students in kindergarten through third grade**
  - The study team's examination of previous Arkansas EB studies, other national adequacy studies, stakeholder engagement feedback, and literature review findings all point to lower student-to-teacher funding ratios for kindergarten through third grade than currently provided for in the Arkansas matrix
  - The EB studies and other national adequacy studies suggest funding at a 15:1 ratio, while the study team's literature review identifies ratios of between 13 and 17:1.

Recommendation 5:
Reconsidering Matrix Resource Levels

- **Recommendation 5a (continued):**
  - Though this study's data analysis did not provide evidence of improved performance at lower class-size ratios, a number of factors must be considered:
    - Class size information used for the analysis was aggregated to the school level so the study team was only able to analyze the effects of average class size on school-level outcomes vs. class level effects
    - Differences in class size by core classrooms or grade level were not documented for analysis
    - The literature review suggests that until class sizes reach the levels indicated, below 17:1, impacts are not likely to be seen

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5b: The Committees should reconsider the non-core staffing level for high schools**
  - The study team's examination of previous EB studies for the state, other adequacy studies, and stakeholder engagement shows evidence that more non-core staff are likely needed for high schools
  - The most recent EB study and national studies identify the need for 33 percent more staff above core teaching staff
  - Stakeholders expressed the need for a higher number of non-core teachers to provide for adequate planning time and to meet course offering needs, such as CTE and AP courses
  - This ability to focus more on these types of career readiness courses would allow the matrix to be well aligned with the recommended career readiness definition

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5c: The Committees should reconsider the secretary staffing level provided in the matrix**
  - The current funding of 1.0 secretary FTE is below recommendations and feedback from the EB studies for the state, other adequacy studies, and stakeholder engagement
  - The most recent EB studies and other adequacy studies all suggest resources of at least 2.0 secretary FTE
  - Stakeholders identified that at least two were needed to cover all the responsibilities of a school's front office
  - Case study schools above 400 students generally had at least two secretarial staff members

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5d: The Committees should reconsider the library/media specialist staffing level funded in the matrix**
  - The current funding of .85 librarian/media specialist FTE is below recommendations and feedback from the EB studies for the state, other adequacy studies, and stakeholder engagement feedback
  - The most recent EB studies and other adequacy studies all suggest resources of at least 1.0 library/media FTE
  - This level of funding is also below state rules/accreditation
  - Stakeholders identified that the funding level is below what is required for a school of 500 students in the state's accreditation system

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5e: The Committees should consider identifying a separate line for assistant principal FTE in the matrix**
  - Current Arkansas accreditation requirements state that "schools with an enrollment exceeding 500 students shall employ at least one full-time principal and a half-time assistant principal, instructional supervisor, or curriculum specialist."
    - Past matrix review studies have identified the ability of districts to utilize part of funded instructional facilitator FTE to staff an assistant principal
    - Currently, districts have 1.78 instructional facilitators and 0.84 assistant principals per 500 students (a total of 2.64 FTE), while the matrix provides 2.5 FTE for instructional facilitators

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5e (continued):**
  - Other adequacy studies all had at least one assistant principal for 500 students, with variation by grade level, and case study schools of similar size also had at least one assistant principal
  - Stakeholder feedback also suggested the need for an assistant principal (at least half-time) in a school of 500 students
  - The study team suggests separating out the resources for assistant principal from the instructional facilitator line item for greater transparency and to allow for consideration of the resources provided separately

Recommendation 5:

Reconsidering Matrix Resource Levels

- **Recommendation 5f: The Committees should consider adding resources for mental health and school security/SROs to the matrix**
  - Two resource areas were most frequently mentioned during stakeholder engagement as being missing from the matrix were school safety/SROs and mental health resources
  - School safety/security:
    - No resources are currently identified for school security/SROs in the matrix
    - Districts identified this as an area that is being covered by other funding, including ESA funds
    - Stakeholders- and community members in particular- expressed growing concerns over school safety/security

Recommendation 5:
Reconsidering Matrix Resource Levels

- **Recommendation 5f: The Committees should consider adding resources for mental health and school security/SROs to the matrix**
  - Student Mental Health resources
    - Stakeholders felt that growing student needs go beyond the expertise of guidance counselors and that specific student mental health resources need to be identified
    - Districts and case study schools often rely on outside/community agencies to provide specialized therapy that go beyond a school counselor's expertise
      - Can create barriers to access
    - Providing additional mental health resources would allow counselors to focus on guidance, including supporting students in career readiness
  - Resources for both school safety/security and student mental health could also be funded separately as a categorical outside the matrix

Recommendation 5:
Reconsidering Matrix Resource Levels

- **Recommendation 5g: The Committees should reconsider the funding for instructional materials in the matrix**
  - The Committees have increased funding for FY22 and FY23 to $192.60 and $197.40 per pupil, respectively.
    - These figures still fall below the recommended funding from all three Arkansas EB studies and other adequacy studies, all of which recommend at least $250 per pupil
    - Districts currently spend $227 per pupil for instructional materials
  - Instructional materials allocations could also be used to address assessment needs, both for interim assessments to allow for data-driven instruction, or to meet any current or forthcoming needs, such as dyslexia screeners or measuring career readiness skills

Funding Outside the Matrix

Recommendation 6:

The state should smooth its ESA funding formula through a weighted adjustment tied to the base foundation amount and focus on providing higher resources per student at lower concentrations of students

Recommendation 6:
ESA Funding Approach

- This recommendation is intended to address three issues in the current approach to ESA funding: (1) funding cliffs, (2) the resource needs of students at lower concentration tiers, and (3) ESA funding historically increasing at a slower rate than foundation funding
- **Funding cliffs:** Arkansas' current ESA funding formula provides funding based on three different funding tiers, which creates "cliffs" at each tier threshold
  - For example, a 1,000-student district with 69 percent of its students qualifying for free or reduced-price lunches (FRL) would currently receive $362,940 (1,000 x .69 x $526). If the districts added just one percent more FRL students, funding would increase to $735,700 (1,000 x .70 x $1,051)
  - A one percentage change in concentration is effectively worth $372,760, more than the total amount of funding for the 690 students in the first example
  - These cliffs embed a high degree of uncertainty in funding and put undue pressure on districts to identify students close to the two cliff thresholds

Recommendation 6:
ESA Funding Approach

- **Students in lower concentration tiers:** the data analysis indicates that a school's concentration of poverty, or the percentage of economically disadvantaged students within a school, is not a statistically significant predictor of proficiency.
  - In contrast, study findings indicated that an individual student being from an economically disadvantaged background is in fact a strong and statistically significant predictor of academic performance.
    - Compared to their wealthier peers, students who were economically disadvantaged were more than seven percentage points less likely to achieve proficiency in math and English.
  - These findings suggest it is more prudent to examine individual student economic status when analyzing student performance, as opposed to a focus on school-level poverty

Recommendation 6:
ESA Funding Approach

- **ESA funding vs. foundation funding over time:** foundation funding through the matrix has historically increased at a higher rate than ESA funding
  - As noted in Recommendation 1, feedback from districts and analysis of expenditures indicates that ESA funds are being used to support other student groups and provide resources for all students, further diluting the potential positive impact of funding for economically disadvantaged students

Recommendation 6:
ESA Funding Approach

- **New ESA formula:** the new ESA formula should focus on targeting a more similar level of resources for all eligible students to better align with the student performance research findings
  - The formula can then include a concentration of poverty adjustment that provides additional resources for districts with the highest concentration of economically disadvantaged students
  - The formula should be smooth, ensuring that there are no cliffs in the system
  - The new formula should use a weighted adjustment linked to the matrix foundation amount (base)
    - The creation of the adjustment can be based on a per-pupil amount but then expressed as a weight of the base
    - This will allow the ESA funding to rise over time with the foundation amount
- The study team recommends that all ESA funds be distributed through this formula mechanism instead of provided funding through two streams: the ESA funding categorical and an ESA grant match program

Recommendation 7:

The Committees should consider removing special education funding from the resources matrix and provide funding based on actual special education students served

Recommendation 7:

Special Education Funding Approach

- Special education is primarily funded through the 2.9 FTE per 500 students included in the funding matrix.
  - This is considered a census-based funding model and presumes that districts have similar percentages of special education students and that these students have similar levels of special education needs.
- However, special education percentages, and spending vary across LEAs in Arkansas

Recommendation 7:
Special Education Funding Approach

	2017-18	2018-19
Percentage of Special Education Students		
Min	2.66%	4.76%
Max	26.56%	33.90%
Mean	12.92%	13.61%
Standard Deviation	3.16%	3.25%
Spending per Special Education Student		
Min	$1,574	$1,364
Max	$18,669	$15,441
Mean	$5,032	$4,899
Standard Deviation	$1,762	$1,513

Recommendation 7:

Special Education Funding Approach

- Arkansas could use the results of the multi-approach adequacy update described in Recommendation 1 to first establish special education funding levels either through a single weight for all special education students or multiple weights based on student need
- Weight(s) would then be applied to the special education student enrollment count and thus provide differentiated funding based on the distribution of students with special education needs across the state.
  - In addition, a multi-weight system would also align resources to the levels of services students need in each district

Summary of Recommendations

1. Adopt a hybrid approach to reviewing adequacy
2. Address discrepancies in teacher quality between schools
3. Develop a legislative task force to investigate and address the out-of-school factors that inhibit performance for high need students
4. Adopt the recommended Career Readiness definition
5. Reconsider current matrix resource levels in the areas where the body of evidence is most consistent
6. Revise ESA funding formula to focus resources at lower concentration levels, smooth funding cliffs, and to use a weighted adjustment tied to the foundation amount
7. Consider removing special education funding from the resources matrix and provide funding based on actual special education students served

Questions?