

RESOURCE ALLOCATION- STAFF IN THE MATRIX

Monday, March 11, 2024*

Updated September 3, 2024

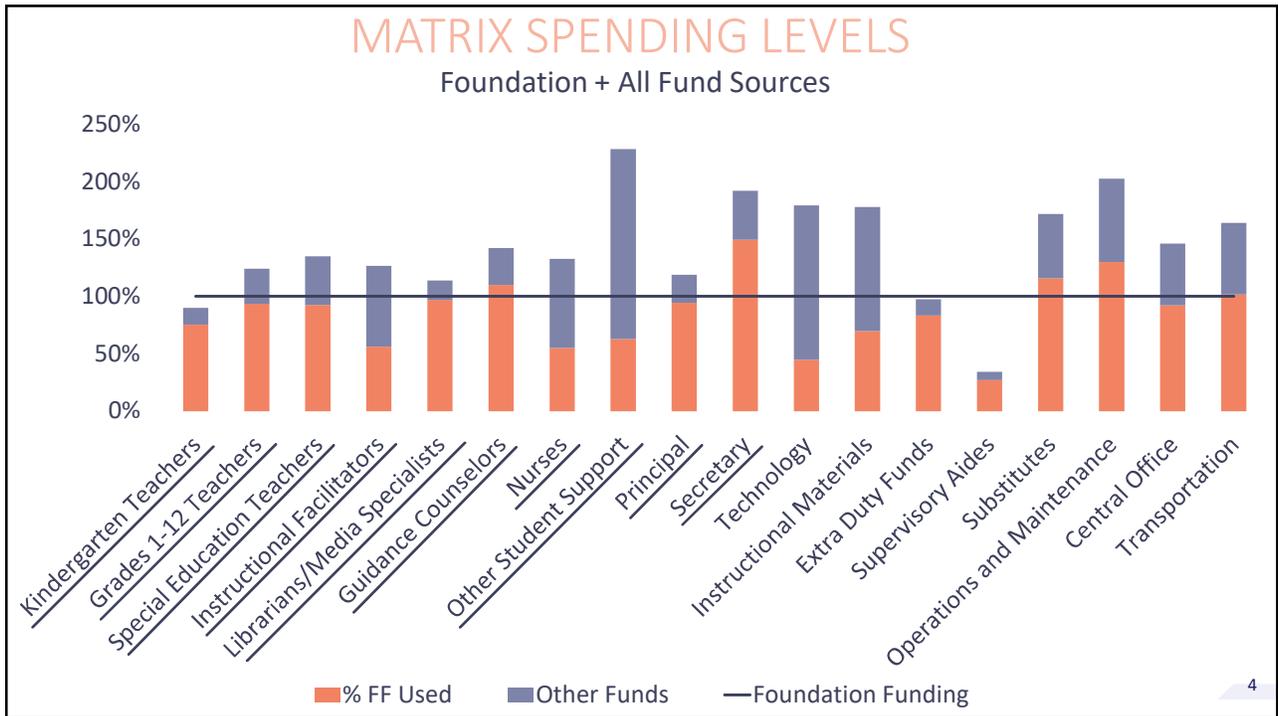
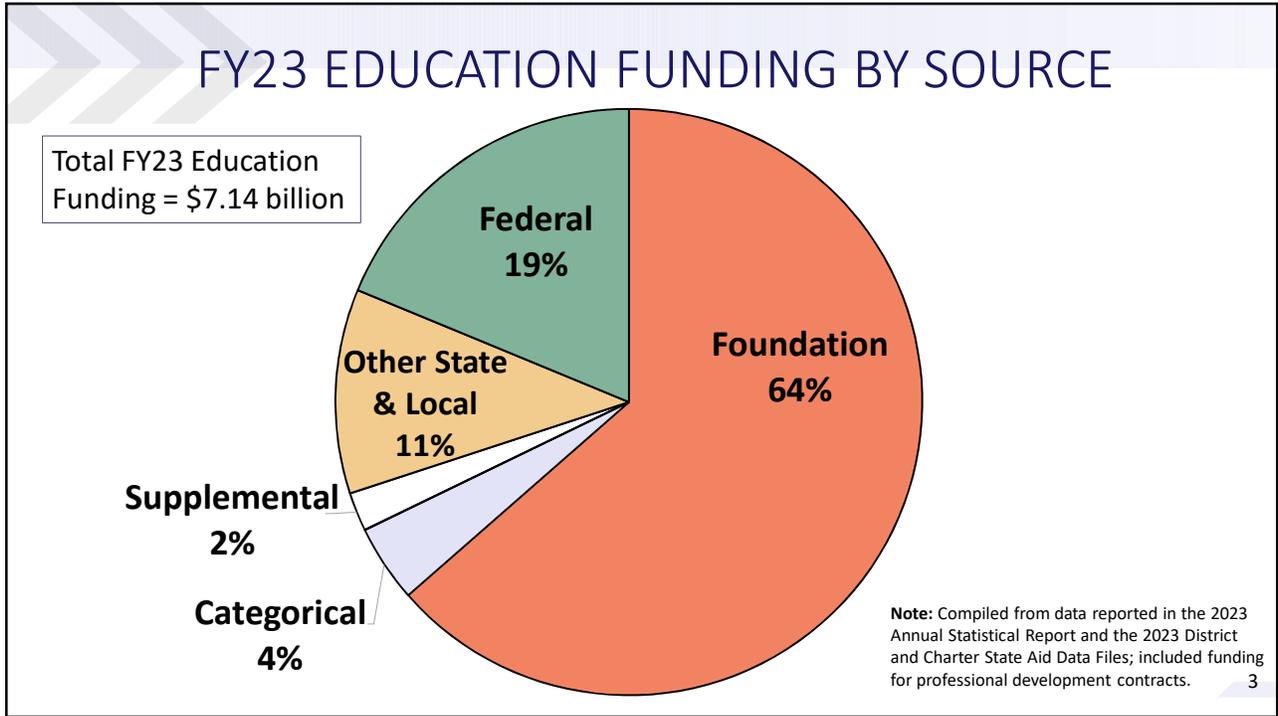


2024 ADEQUACY STUDY



- Adequacy Report Tracking Sheet
- Resource Allocation Reports
 1. Matrix – Staffing
 2. Matrix – School-level Resources
 3. Matrix – District-level Resources
 4. Categorical, Supplemental, and Non-Matrix Spending

NOTE: Spending by category charts updated September 3, 2024, to correct data for several schools classified in the wrong size categories.



MATRIX – SCHOOL-LEVEL STAFFING

Matrix	FY23	FY24	FY25
Matrix Calculations			
School Size	500	500	500
K = 8% of students	40	40	40
Grades 1-3 = 23% of students	115	115	115
Grades 4-12 = 69% of students	345	345	345
Staffing Ratios			
K P:T ratio = 20:1	2.0	2.0	2.0
Grades 1-3 P:T ratio = 23:1	5.0	5.0	5.0
Grades 4-12 P:T ratio = 25:1	13.8	13.8	13.8
PAM = 20% of classroom	4.14	4.14	4.14
Total Classroom Teachers	24.94	24.94	24.94
Special Ed Teachers	2.9	2.9	2.9
Instructional Facilitators	2.5	2.5	2.5
Librarian / Media Specialist	0.85	0.85	0.85
Guidance Counselor & Nurse	2.5	2.5	2.5
Total Pupil Support Personnel	8.75	8.75	8.75
Principal	1.0	1.0	1.0
Secretary	1.0	1.0	1.0
TOTAL School-Level Personnel	35.69	35.69	35.69

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Foundation Funding: Kindergarten

2023 / 2024 / 2025	2023 Funding Amount
\$293 / \$298 / \$304	\$138,240,024

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Class Size Rules and Matrix Funded Ratios

- DESE Rules call for an **average kindergarten class size of 20**. However, kindergarten classes are allowed to reach a total of 22 students if a half-time instructional aide is present
- The matrix funds **two core kindergarten teachers** for the prototypical K-12 school of 500 students.
- While the matrix funds the number of kindergarten teachers needed to meet class size rules, this happens only if a school hits the mark exactly.

For example, if a school ends up with more than 45 kindergarten students, three teachers would be needed to meet class size rules.

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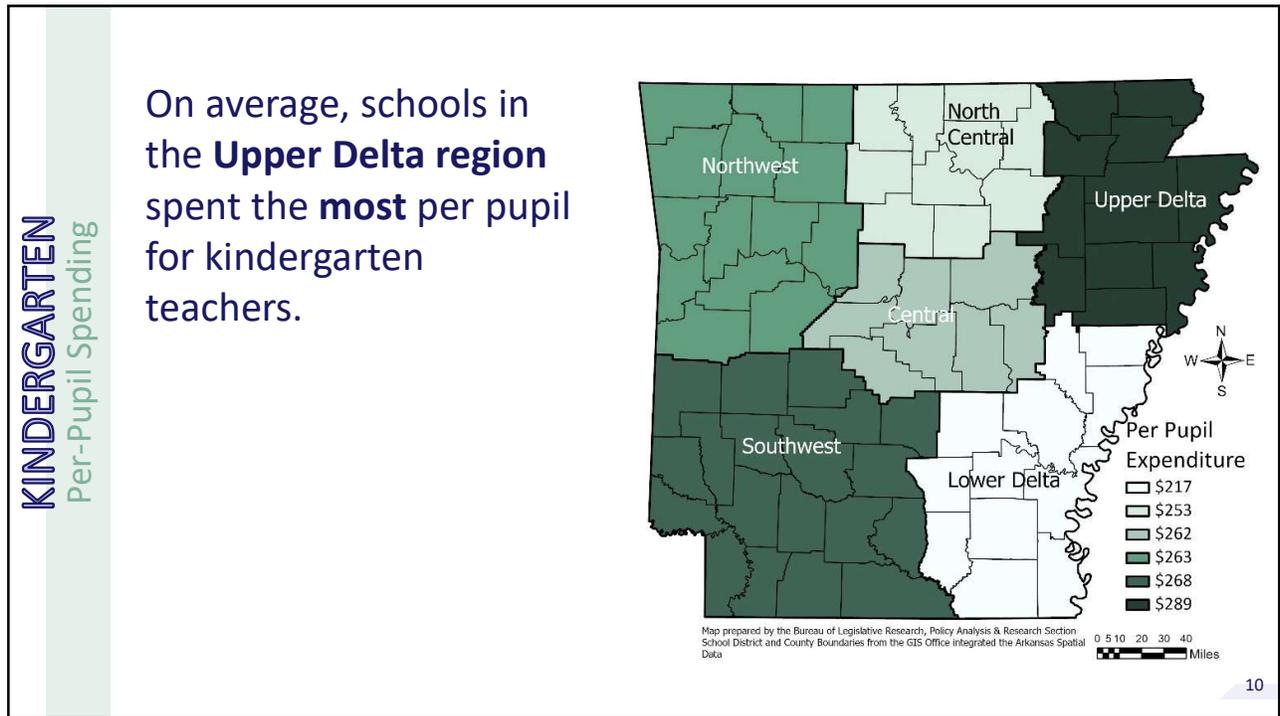
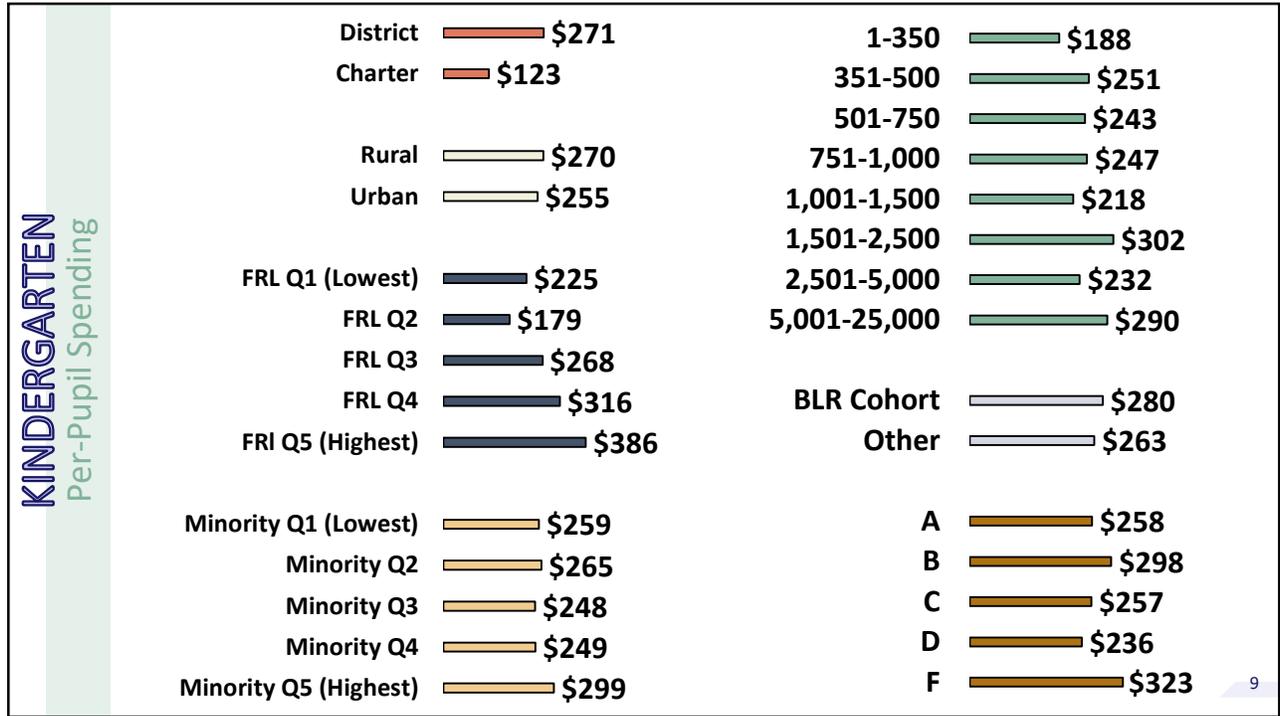


Foundation Funding vs. Spending:

Kindergarten



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Foundation Funding: **Grades 1-3 Teachers**

2023 / 2024 / 2025	2023 Funding Amount
\$732 / \$745 / \$760	\$345,642,875

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Class Size Rules and Matrix Funded Ratios

- For **grades 1-3**, DESE Rules call for an **average class size of 23** with **no more than 25 students** per teacher.
- The matrix funds **five** core grades 1-3 teachers for the prototypical K-12 school of 500 students.
- The matrix assumes a total of 115 students in grades 1-3, which equates to **38.33 students per grade**.
 - Based on the assumed number of students per grade, two classes in each grade are **required** to meet class size rules, which could result in a need for **six** core teachers.

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Foundation Funding: **Grades 4-12 Teachers**

2023 / 2024 / 2025	2023 Funding Amount
\$2,020 / \$2,055 / \$2,098	\$953,823,235

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Class Size Rules and Matrix Funded Ratios

- For **grades 4-6**, DESE Rules call for an **average class size of 25** with **no more than 28 students** per teacher.
- With the exception of classes that lend themselves to large group instruction, the Rules stipulate that individual classes **shall not exceed 30 students in grades 7-12**; however, an average class size is not specified.
- The matrix funds **13.8** core teachers **for grades 4-12** for the prototypical K-12 school of 500 students, which is up to **4.2** teachers short of the number needed to meet classroom size rules.

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Foundation Funding: "PAM" Teachers

2023 / 2024 / 2025	2023 Funding Amount
\$606 / \$617 / \$629	\$286,146,970

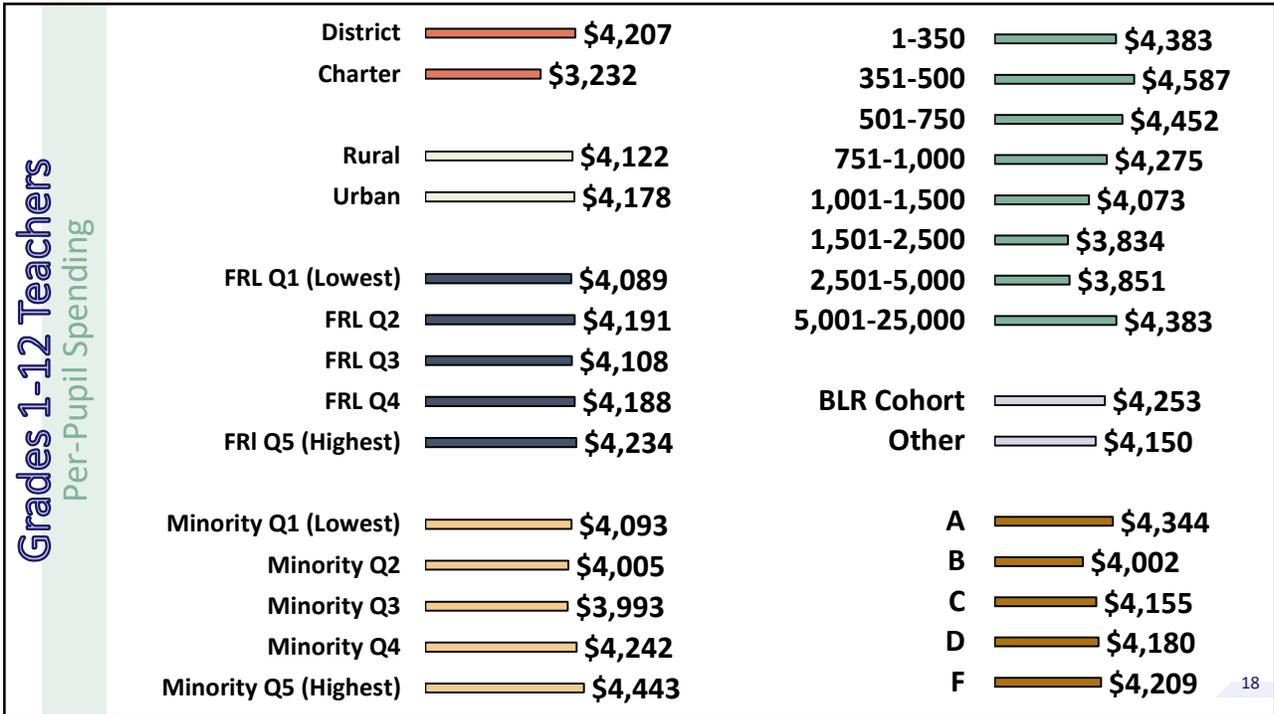
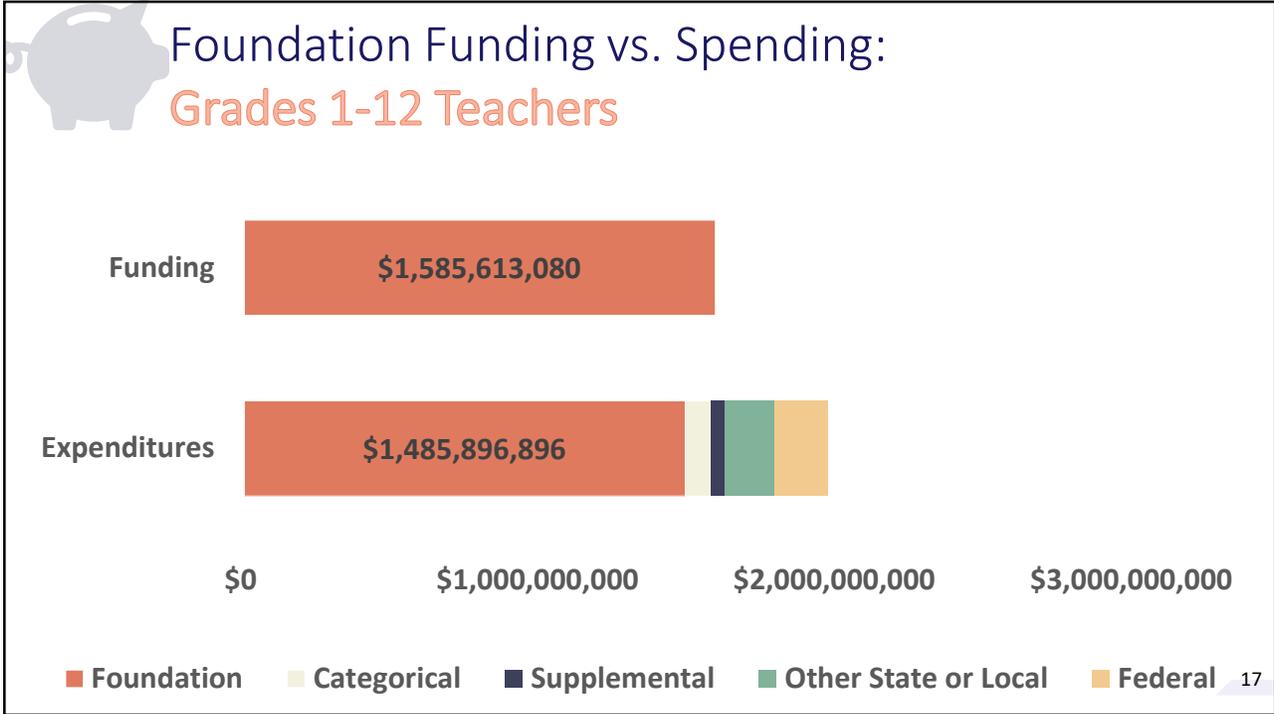
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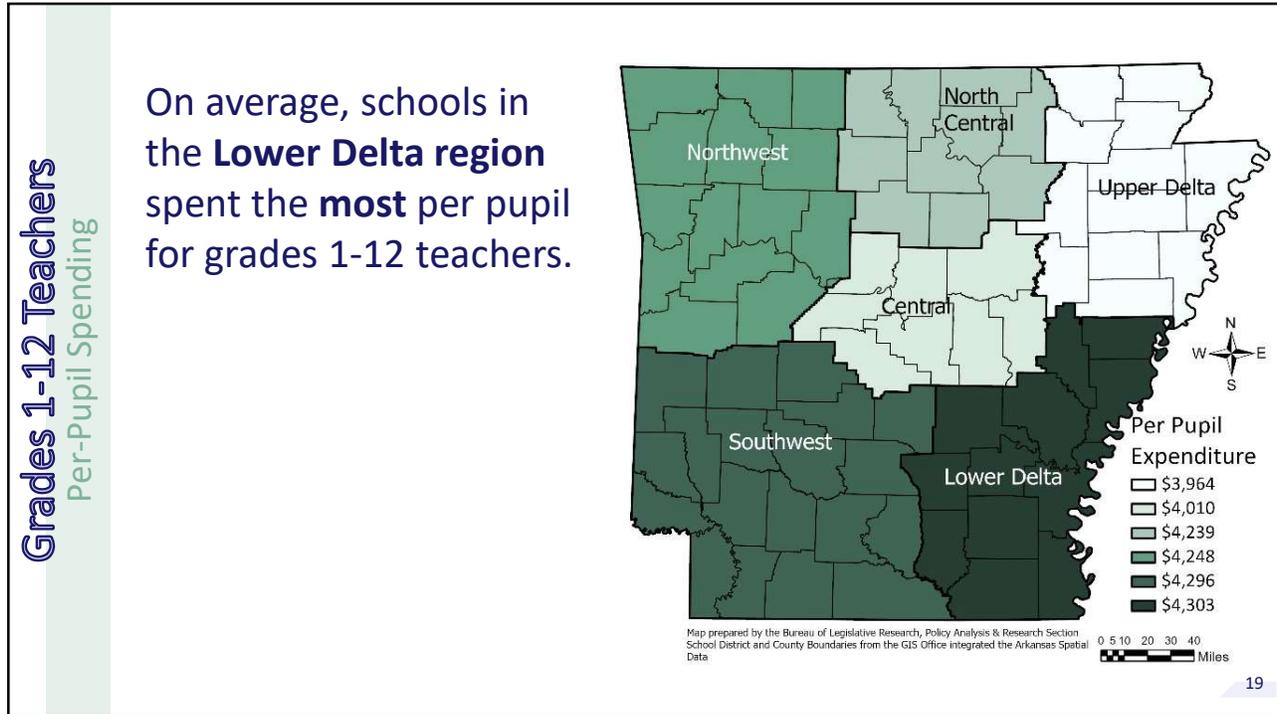


Class Size Rules and Matrix Funded Ratios

- According to DESE Rules, courses that lend themselves to large group instruction - as do many PAM courses - **can exceed 30 students in grades 7-12.**
- The matrix funds **4.14 specialist teachers** who teach non-core academic subjects such as art, music, and physical education, and help to provide teachers of core academic subjects time for professional development, planning, and preparation.
- This is a little less than **20%** of the total number of core teachers the matrix indicates is funded.

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Research and Best Practices

Teacher-Student Ratios

2023 Matrix	2023 Matrix Teacher-Student Ratio	Evidence-Based Model*
Kindergarten	1:20	1:15
Grades 1-3	1:23	1:15
Grades 4-12	1:25	1:25

- Literature review findings recommend lower student-to-teacher ratios for K-3 grades than what is currently funded through the matrix.
- Evidence-based studies and other national adequacy studies suggest a 1:15 ratio for K-3.

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Research and Best Practices

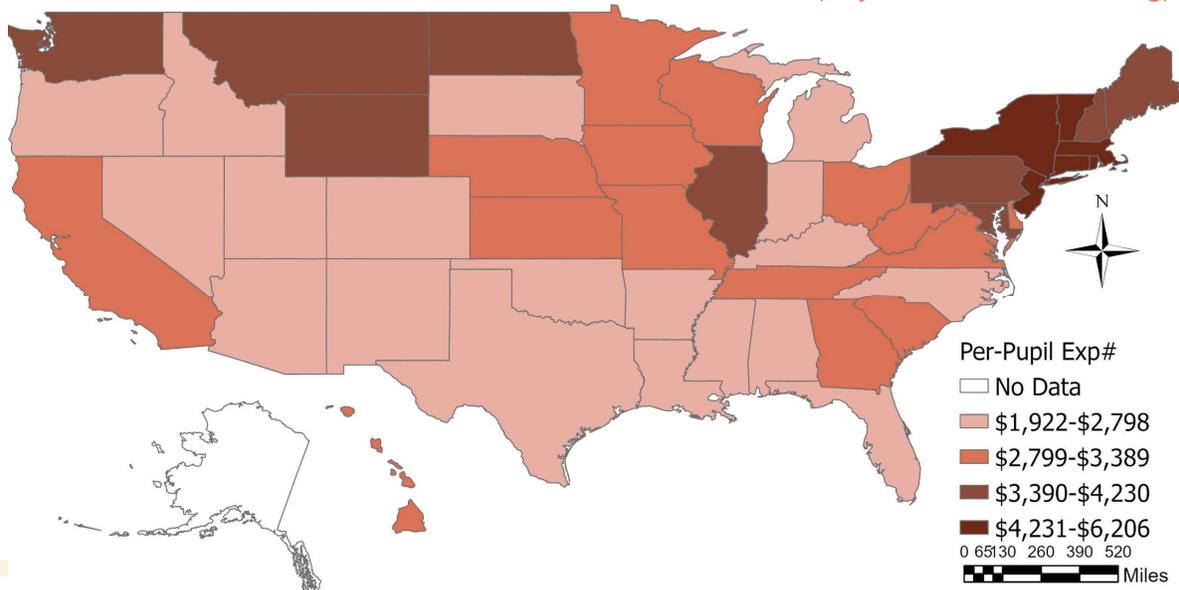
Teaching Staffing Levels

Core and Non-Core Teachers				
Matrix Item: Classroom Teachers	Matrix FTE: All grades	Evidence-Based Model FTE: 450-student prototypical elementary school	Evidence-Based Model FTE: 450-student prototypical middle school	Evidence-Based Model FTE: 600-student prototypical high school
Core: English Language Arts, Math, Social Studies and Science	20.8:500	26:450	18:450	24:450
Non-Core: PE, Art, Music and other electives	4.14:500	5.2:450	3.6:450	8.0:600
	20% of Core	20% of Core	20% of Core	33 1/3% of Core
Total	24.94:500	31.2:450	21.6:450	32:600

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INSTRUCTIONAL SALARIES PER-STUDENT SPENDING

Based on All Students Grades K-12 (Adjusted for Cost of Living)



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Arkansas Educators' Feedback

Stakeholder feedback provided in the 2020 APA report indicated that the funded ratio being too close to the state class size maximum requirements is an issue.

For example, a school may have 45 kindergarteners, which would provide funding for just over 2.0 FTE, but staffing would require three full teachers to adhere to the state class size maximum of 20 (or 22 with aides).

Survey Says:

- **69%** of superintendents reported their districts were in **moderate** or **extreme** need of more funding for classroom teachers.
- **48%** of teacher respondents indicated they **do not receive 200 minutes** for planning every week, and **49%** reported the planning time they receive during the instructional day is **not sufficient**.

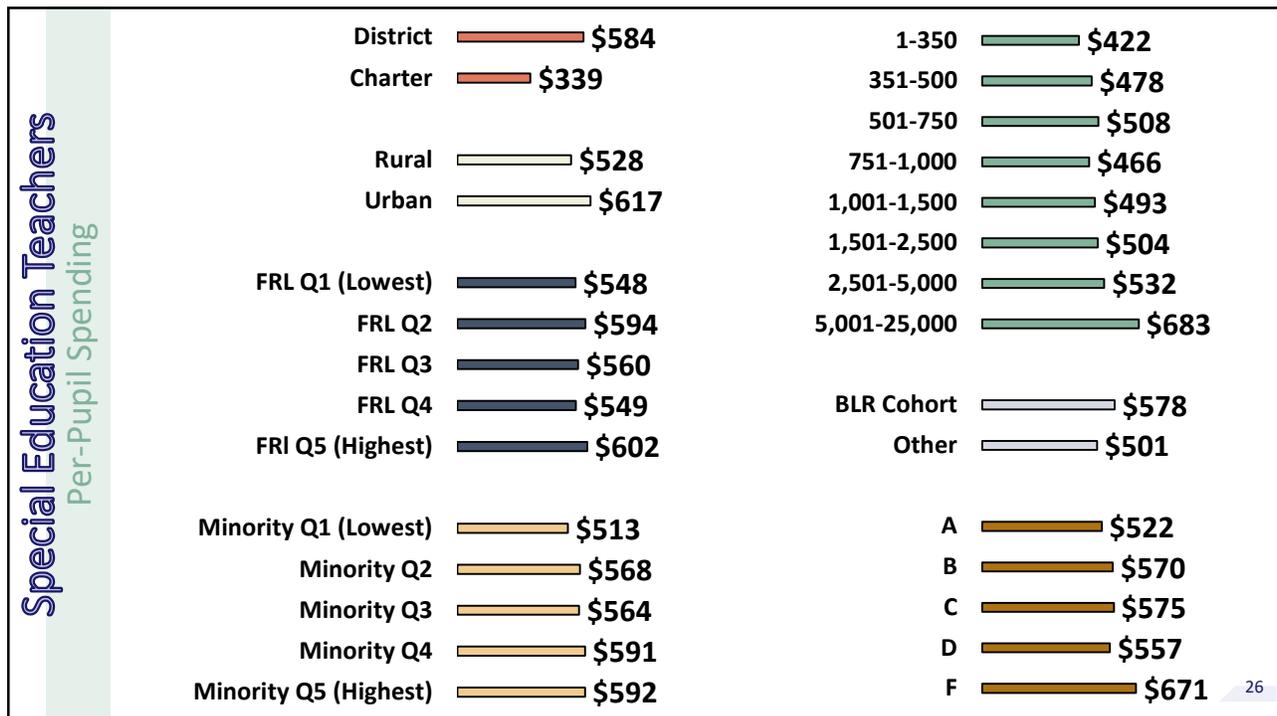
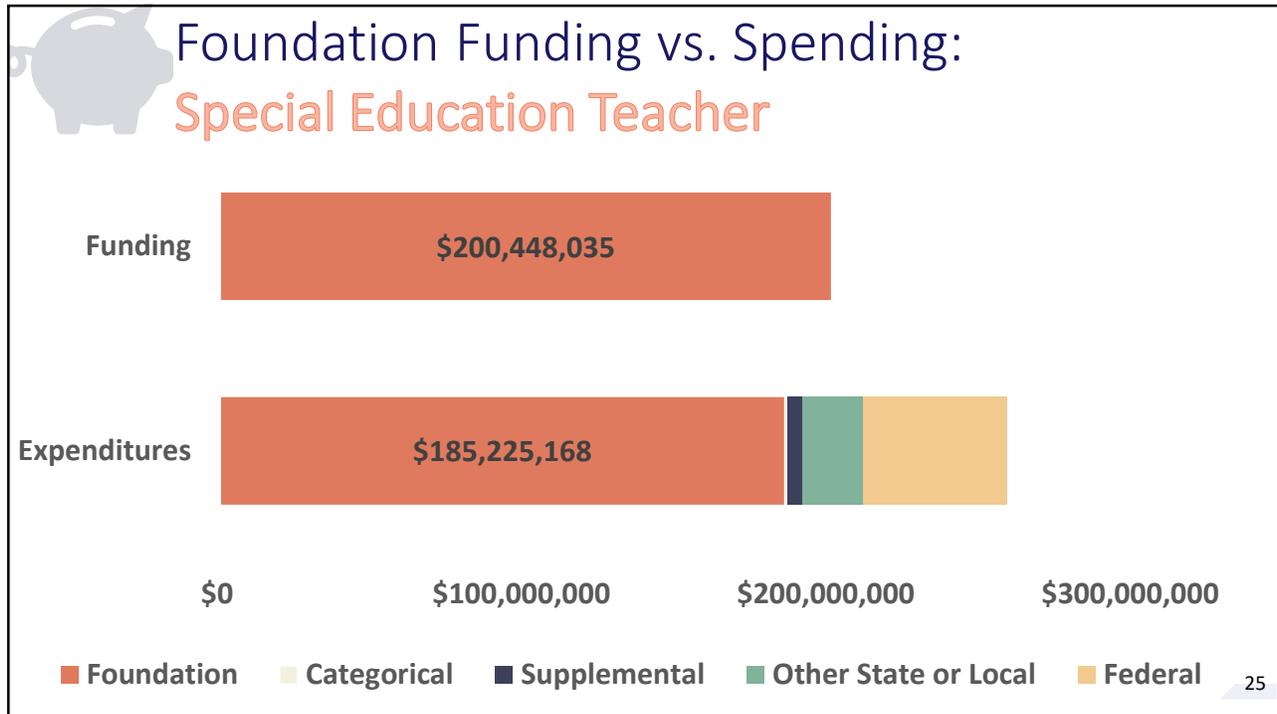
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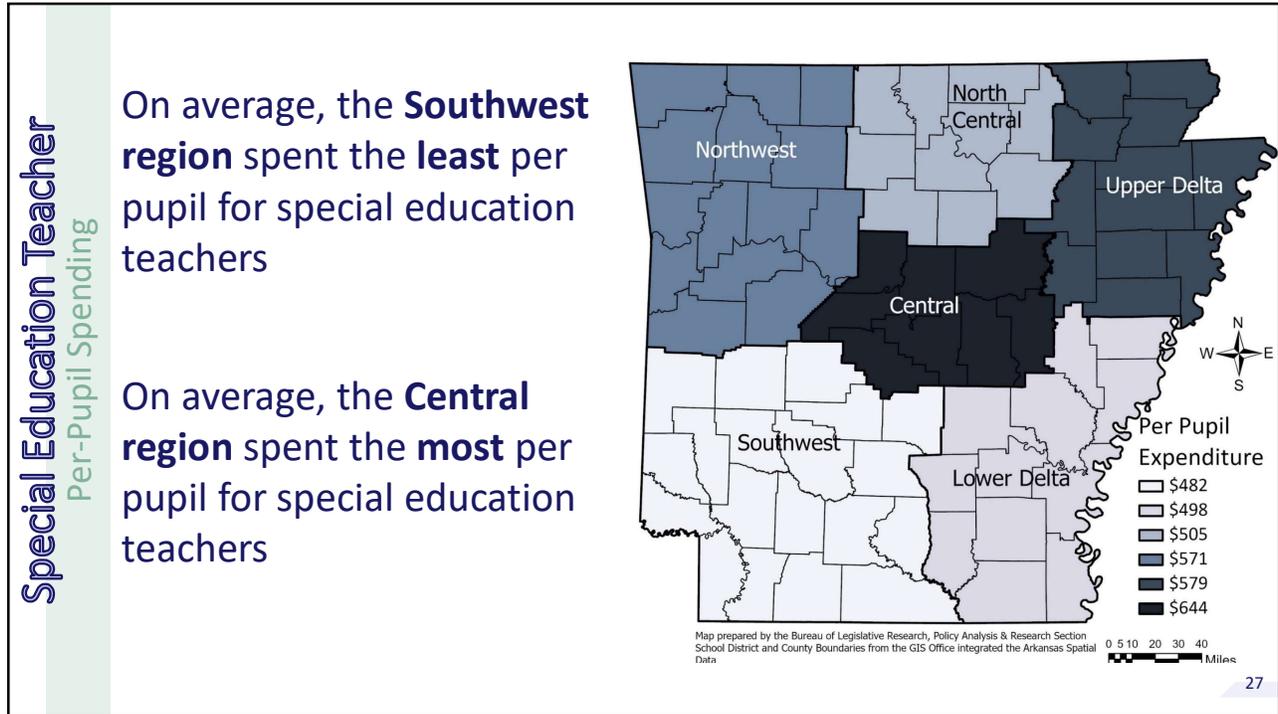


Foundation Funding: Special Education Teacher

2023 / 2024 / 2025	2023 Funding Amount
\$424 / \$432 / \$441	\$200,448,035

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Research and Best Practices

Odden and Picus Special Education Evidence-Based Model

Funding Mechanisms	Census Approach and High-Cost
Staffing for students with Mild and Moderate Disabilities	5 special education teachers and 1 teacher behaviorist (or 6 total teacher positions) per 1,000 students
Staffing for students with severe and profound, and high cost-to-serve disabilities	Fund 100% of extra costs for students with severe and profound disabilities (minus federal Title VI-B); AND Limit students covered here to 2% of students in the district
Staffing for related services	1.1 per 1,000 students
Staffing for costs associated with developing and continually reviewing individualized education plans (Psychologists)	1 psychologist per 1,000 students
Total Special Education Staffing	8.1 positions for every 1,000 students (or 4.05 for every 500 students)

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Research and Best Practices

APA Recommendations (2020)

1. Remove special education from matrix
2. Fund based on actual students in special education served
 - Weighted System (Single or Multiple Weights)
 - Multi-weight system would align resources to levels of services students need in each district

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Research and Best Practices

Special Education Funding Mechanism in Other States (Part 1)

Hybrid 22 states

- Using two or more funding mechanisms

Multiple Student Weights 20 states + DC

- Student weights or dollars amounts based on certain factors or student needs

High-Cost 17 states

- Often paired with other methods – Covers part or all expenses above specific threshold

Census-Based 13 states

- Based on assumed level of total enrollment, regardless of actual demographics

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Research and Best Practices

Special Education Funding Mechanism in Other States (Part 2)

Flat Weight 9 states

- Single weight/dollar amount for all students in special education

Reimbursement 9 states

- State reimburse districts for all or portion of eligible special education expenditures

Resource-Based Allocation 6 states

- Districts receive a minimum base amount of resources (e.g. staffing, services, programs)

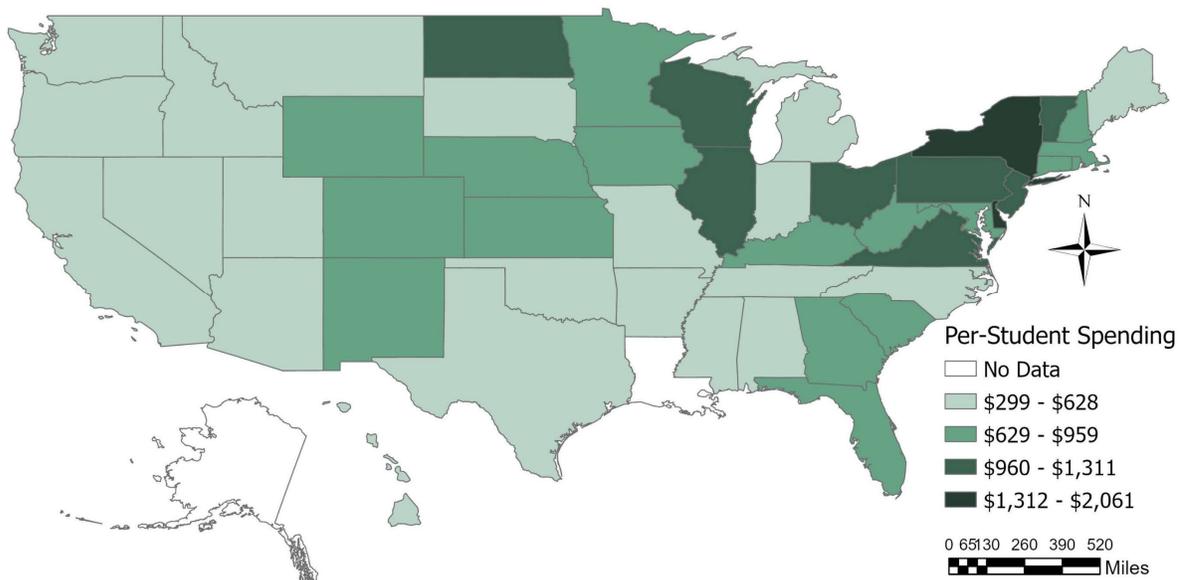
Categorical Grant 2 states

- State distribute funds based on student characteristics or program needs to districts that demonstrate eligibility and/or need for funding

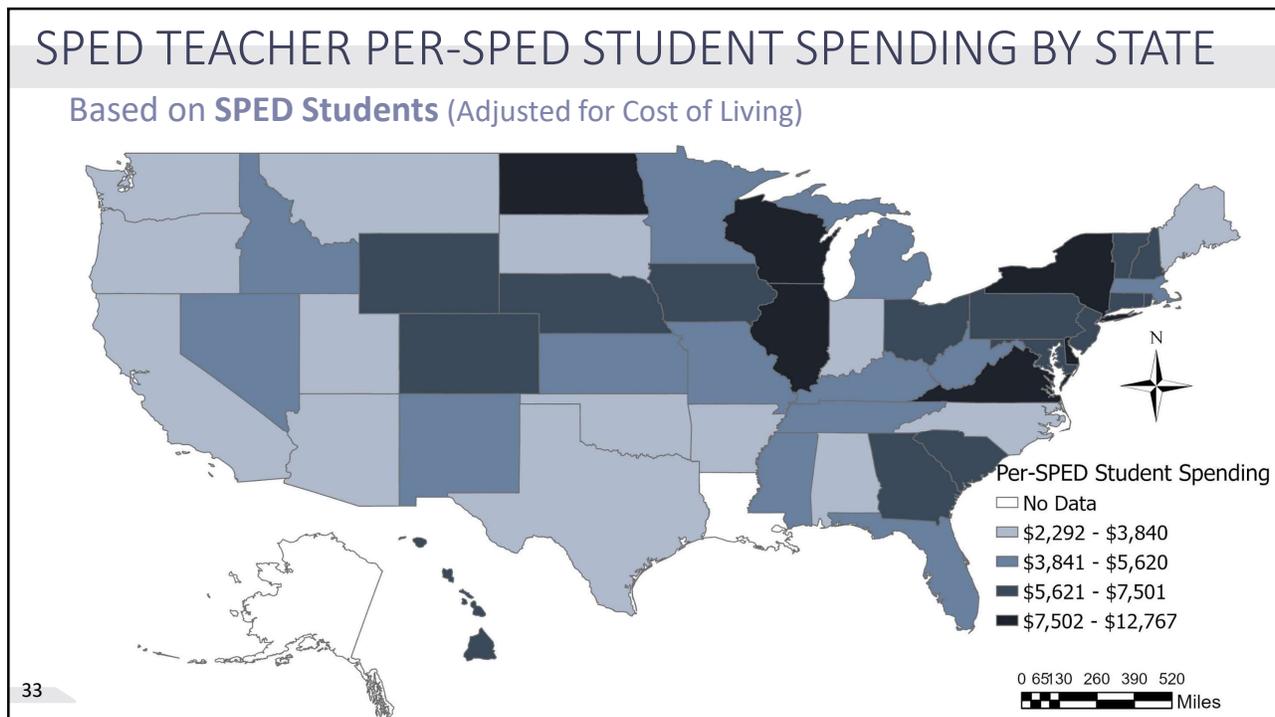
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SPED TEACHER PER-STUDENT SPENDING BY STATE

Based on **All Students** (Adjusted for Cost of Living)



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Arkansas Educators' Feedback

Survey Says:

72% of superintendents reported that their districts were in **moderate** or **extreme** need of more funding for special education teachers

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Foundation Funding: Instructional Facilitators

2023 / 2024 / 2025	2023 Funding Amount
\$366 / \$372 / \$380	\$172,800,031

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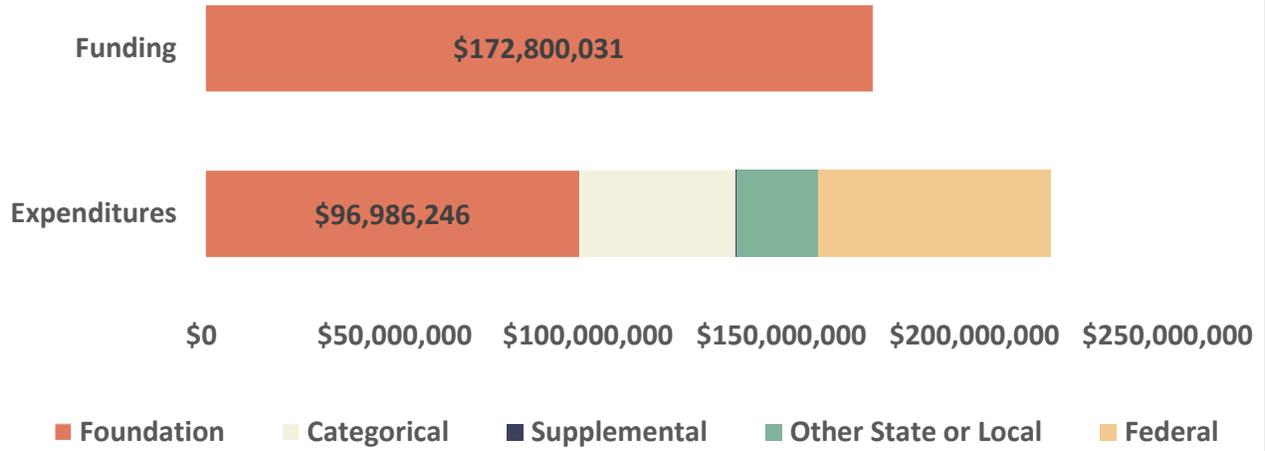
DESE Rules and Matrix Funded Ratios

- There are no state Standards for Accreditation that require the use of instructional facilitators; however, schools with more than 500 students are **required to have a half-time “assistant principal, instructional supervisor, or curriculum specialist” in addition to a principal** (Standard 4-C.1).
- Waivers for these personnel may be applied for, although there is no effect on funding.
- The matrix funds **2.5 instructional facilitators** for every 500 students;
 - However, the 2.5 positions are also used to pay for a half-time assistant principal (.5 FTE) and a half-time technology assistant (.5 FTE), although not all schools or school districts employ those staff.

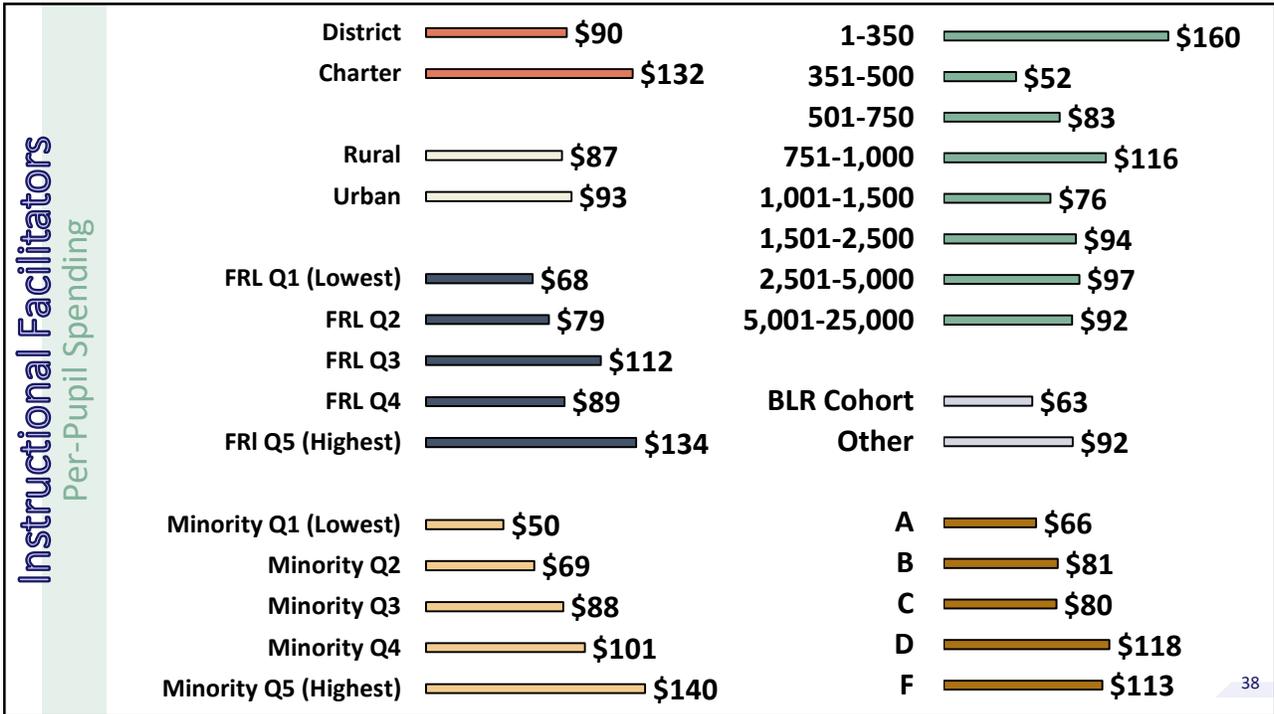
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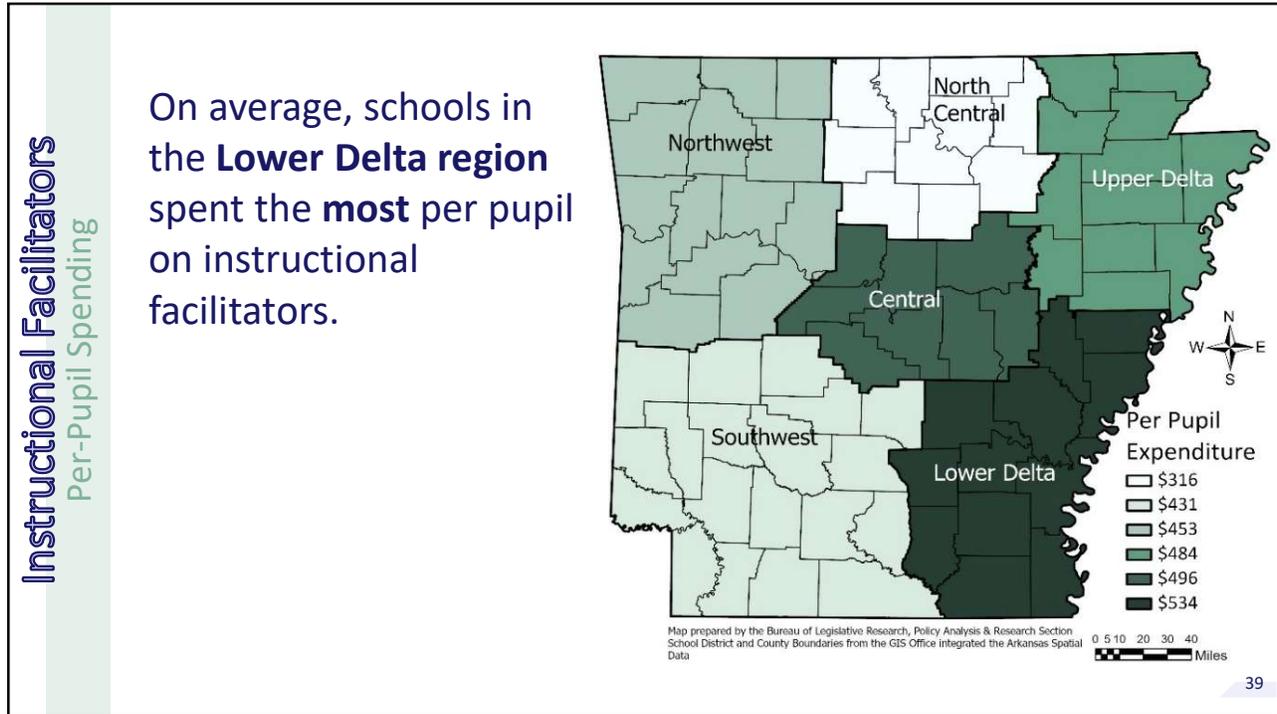
Foundation Funding vs. Spending: Instructional Facilitators



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Research and Best Practices
Instructional Facilitators

2023 Matrix Teacher-Student Ratio	Evidence-Based Model
2.5:500	2.25:450 elementary and middle schools 3:600 high schools

Research cited by Odden & Picus shows nearly all improving schools provide resources to:

- Fund instructional coaches to not only design the instructional program
- Work with school-based data teams and provide the ongoing coaching and mentoring necessary for teachers to improve their practice at scale

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Arkansas Educators' Feedback



57% of superintendents reported their districts were in **moderate** or **extreme** need of more funding for instructional facilitators.



Foundation Funding: Librarians/Media Specialists

2023 / 2024 / 2025	2023 Funding Amount
\$124 / \$127 / \$129	\$58,752,010



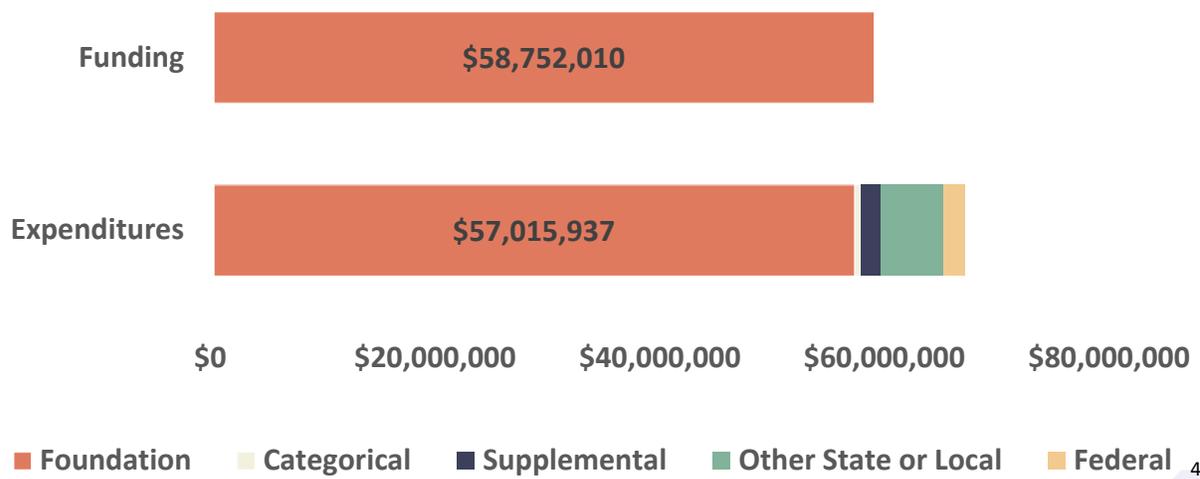
DESE Rules and Matrix Funded Ratios

- The matrix funds **0.85 librarian/media specialists** for 500 students.
- The state's Standards for Accreditation call for public schools with:
 - **Fewer than 300** students to **employ at least one half-time** specialists
 - **300 or more** students to **employ at least one full-time** specialists
 - **1,500 or more** students to **employ at least two full-time** specialists
- Waivers are granted from this accreditation standard. No adjustment to funding is made due to waivers.

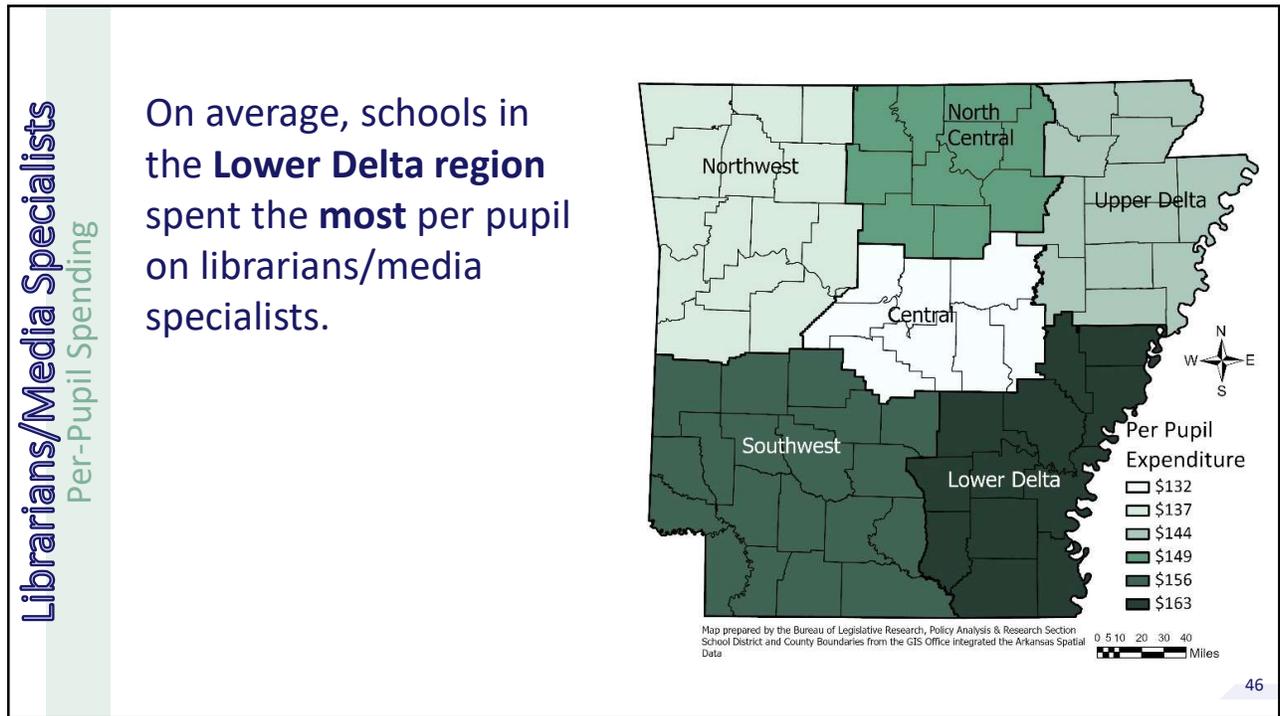
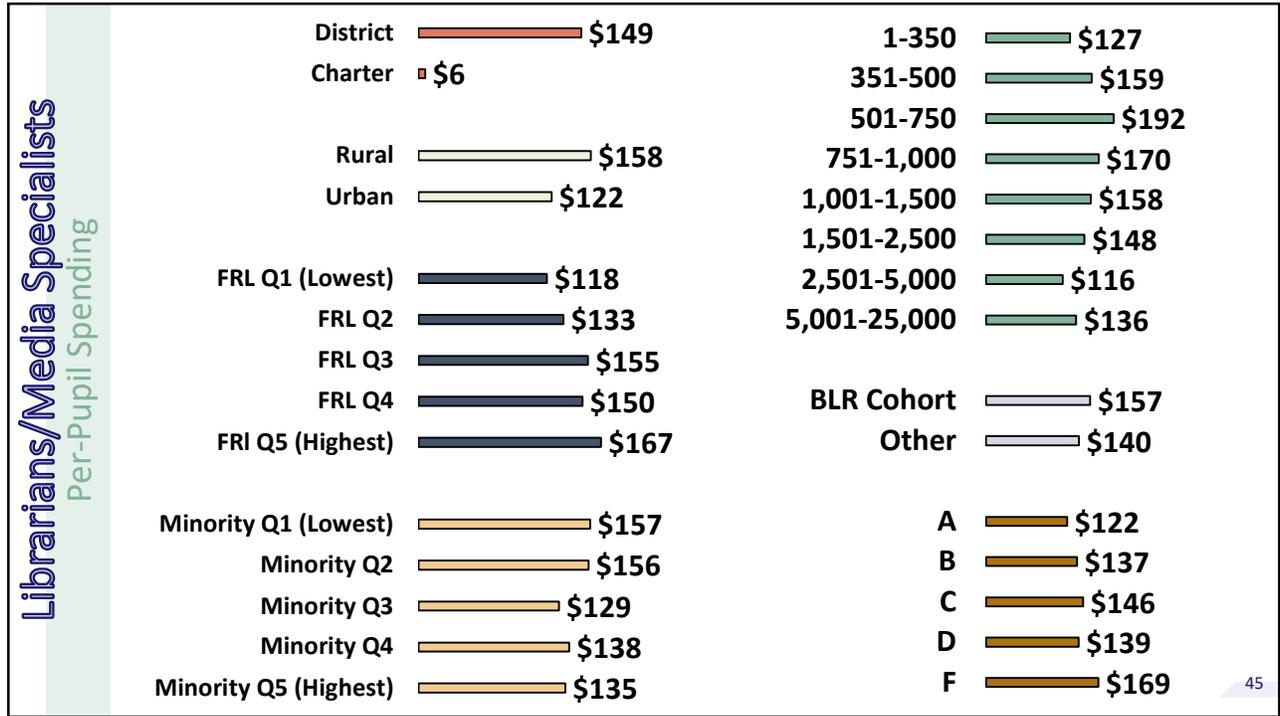
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Foundation Funding vs. Spending: Librarians/Media Specialists



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Research and Best Practices

Librarian/Media Specialist

2023 Matrix	Evidence-Based Model
Teacher-Student Ratio	
.85:500	1:450 elementary and middle schools 1:600 high school

- The Odden & Picus evidence-based model provides for 1.0 library/media FTE position for each prototypical school.
- APA reported the funding in the matrix is below recommendations found in other state adequacy studies.
- Both APA and O&P cite studies that suggest resources of at least 1.0 library/media specialist FTE.
- A 2012 Colorado study using data from 2005-2011 showed that students with access to licensed librarians working full time performed better on state reading assessments.

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Arkansas Educators' Feedback

Survey Says:

43% of superintendents reported their districts were in **moderate** or **extreme** need of more funding for librarians/media specialists.

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Foundation Funding: **Guidance Counselors**

2023/ 2024 / 2025	2023 Funding Amount
\$162 / \$165 / \$169	\$76,723,214

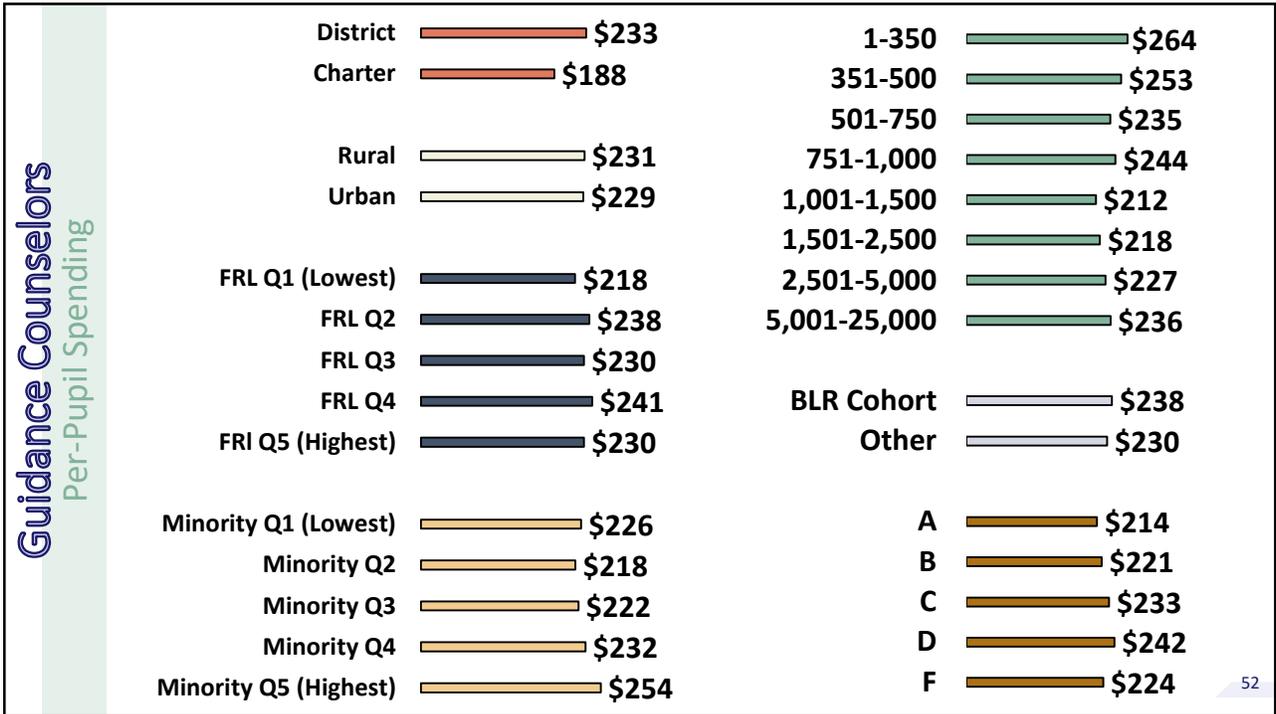
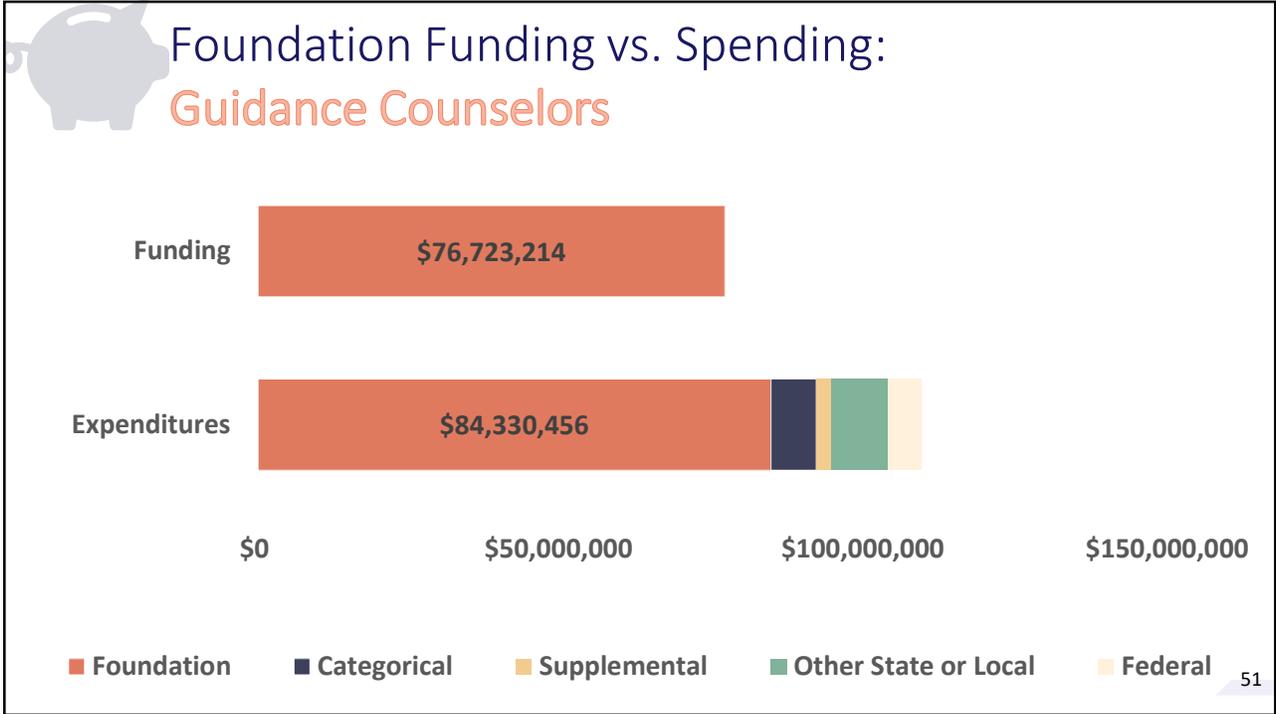
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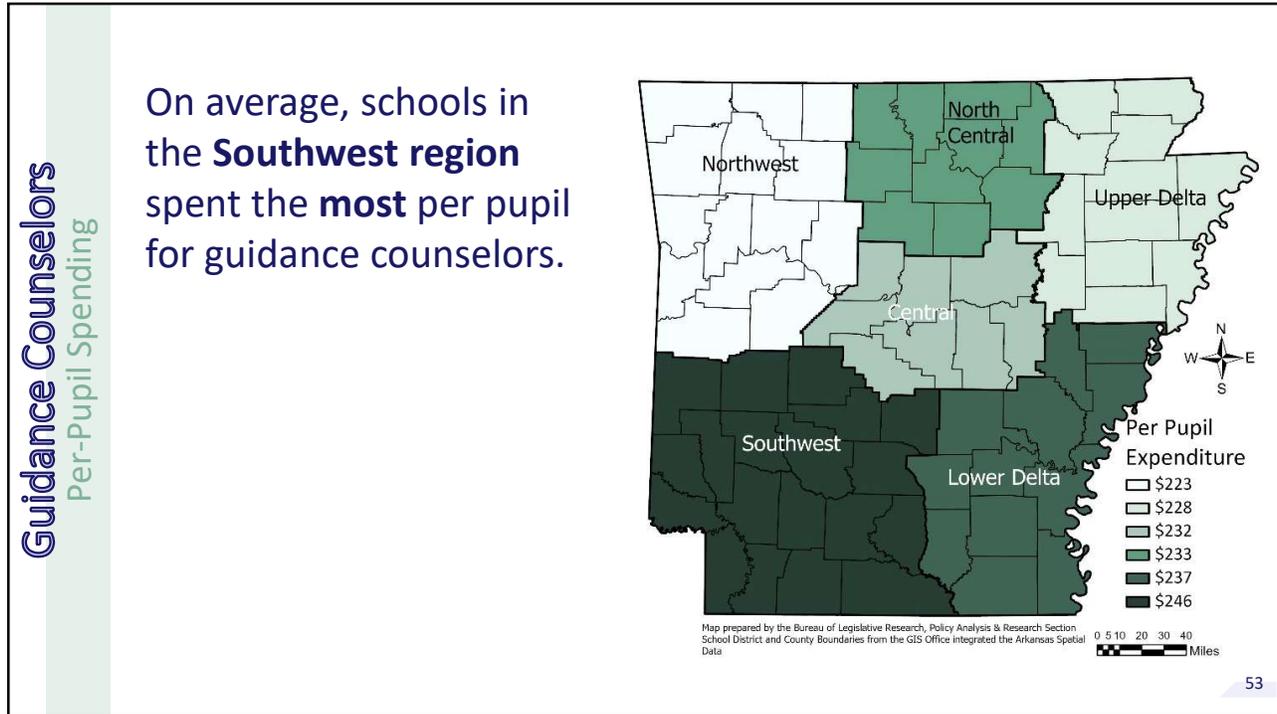


DESE Rules and Matrix Funded Ratios

- The matrix funds **1.11 guidance counselors** for every 500 students.
- The state's Standards for Accreditation **require districts to have at least one counselor** for every 450 students, which equates to approximately 1.1 FTEs per 500 students (Standard 4-E.2).
- Waivers are granted from this accreditation standard.
No adjustment to funding is made due to waivers.

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Research and Best Practices
Guidance Counselors

2023 Matrix Teacher-Student Ratio	Evidence-Based Model
1.11:500	1:450 grades K-5 1:250 grades 6-12

Odden & Picus cite numerous research studies that show school counseling programs designed after the model developed by the American School Counselor Association (ASCA) using a 1:250 ratio has a positive impact on student learning, achievement test scores, and graduation rates.

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Arkansas Educators' Feedback

Survey Says:

- **53%** of superintendents reported their districts were in **moderate** or **extreme** need of more funding for guidance counselors.
- The guidance counselors who responded to the teacher survey indicated **76%** of their time is spent on direct services, while the other **24%** is spent on administrative duties.

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Foundation Funding: Nurses

2023 / 2024 / 2025	2023 Funding Amount
\$98 / \$100 / \$102	\$46,310,408

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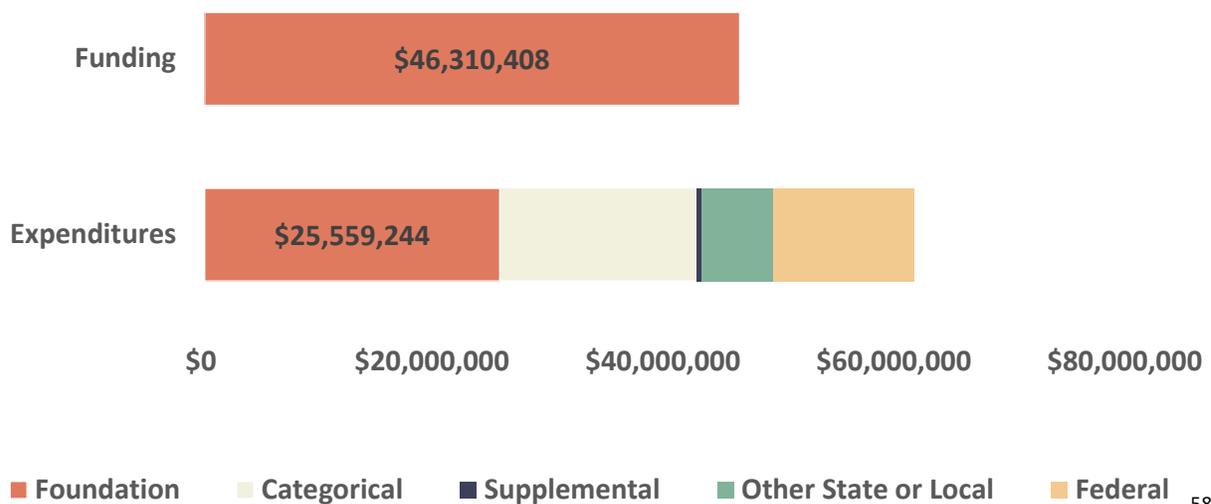
DESE Rules and Matrix Funded Ratios

- The matrix funds **.67 FTE nurses** for every 500 students.
- State law **requires** districts to have **at least one nurse** per 750 students (§ 6-18-706(c)(1)). The law also notes that districts with “a high concentration of children with disabling conditions as determined by the State Board of Education ... should” have a nurse-to-student requirement of 1:400. In districts that “provide a center for profoundly disabled students,” the ratio “should” be 1:125. [§ 6-18-706(c)(2) and (3)].
- However, the law also includes a provision that makes these requirements effective “only upon the availability of state funds” (§ 6-18-706(e)(1)).

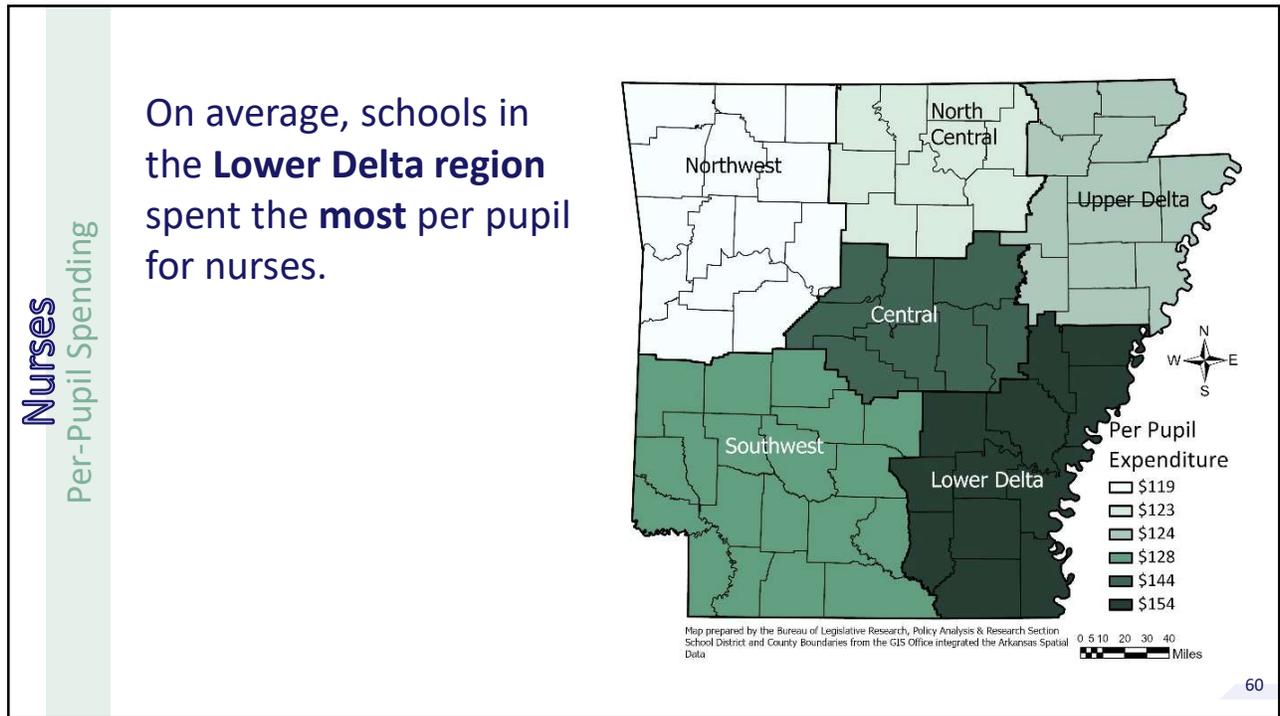
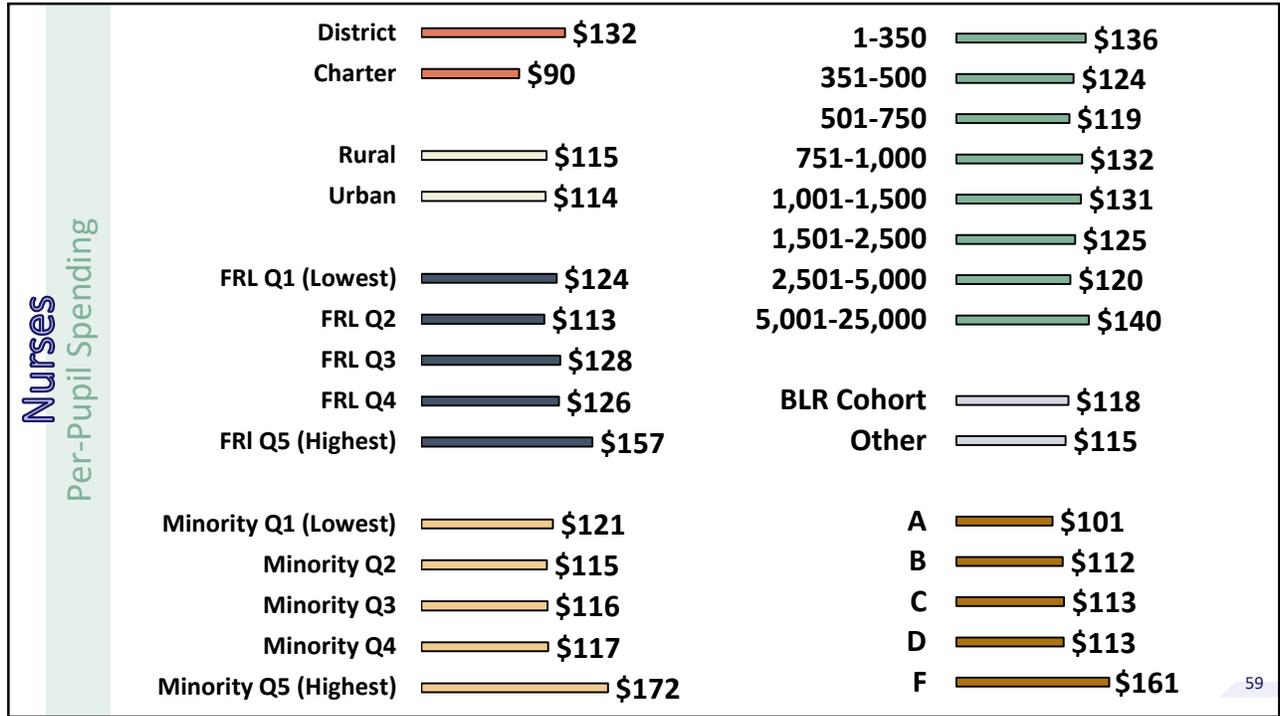
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Foundation Funding vs. Spending: Nurses



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Research and Best Practices

Nurses

2023 Matrix Nurse-Student Ratio	Evidence-Based Model
0.67:500	1:750

- The evidenced-based model uses the staffing standard of the National Association of School Nurses.
- This allocation allows districts to provide a half-time nurse in each prototypical elementary and middle school and a full-time nurse in each prototypical high school.
- The National Association of School Nurses defines school nursing as a specialized practice of nursing that protects and promotes student health and advances academic success. It is the association's position that a full-time registered school nurse be present in every school, every day.

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Arkansas Educators' Feedback

Survey
Says:

58% of superintendents reported their districts were in **moderate** or **extreme** need of more funding for nurses.

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Foundation Funding: Other Student Support

2023/ 2024/ 2025	2023 Funding Amount
\$105 / \$107 / \$109	\$49,766,409

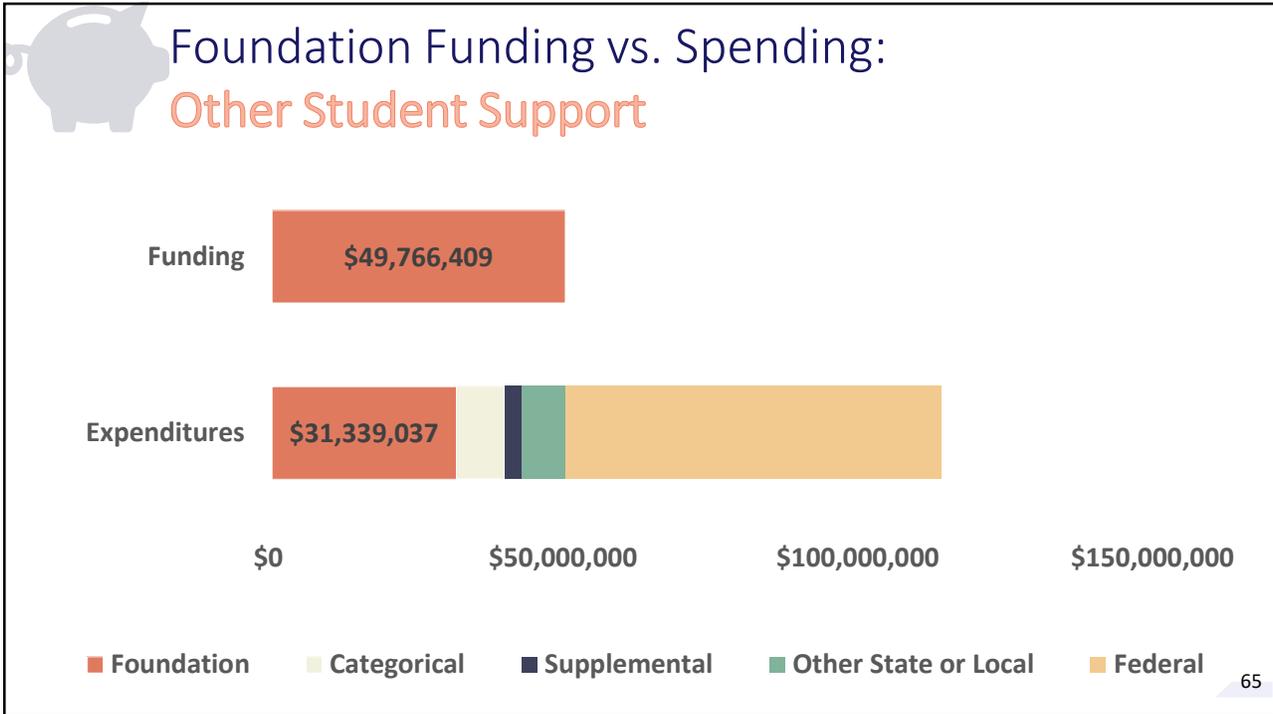
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DESE Rules and Matrix Funded Ratios

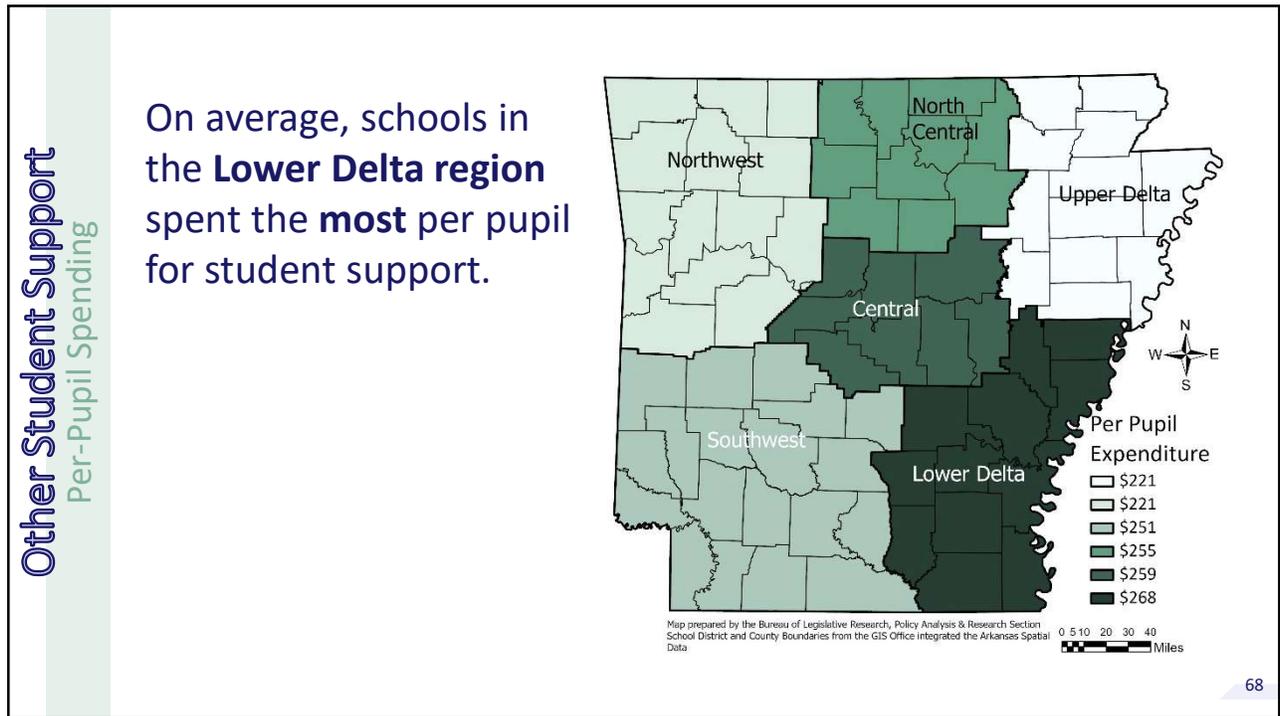
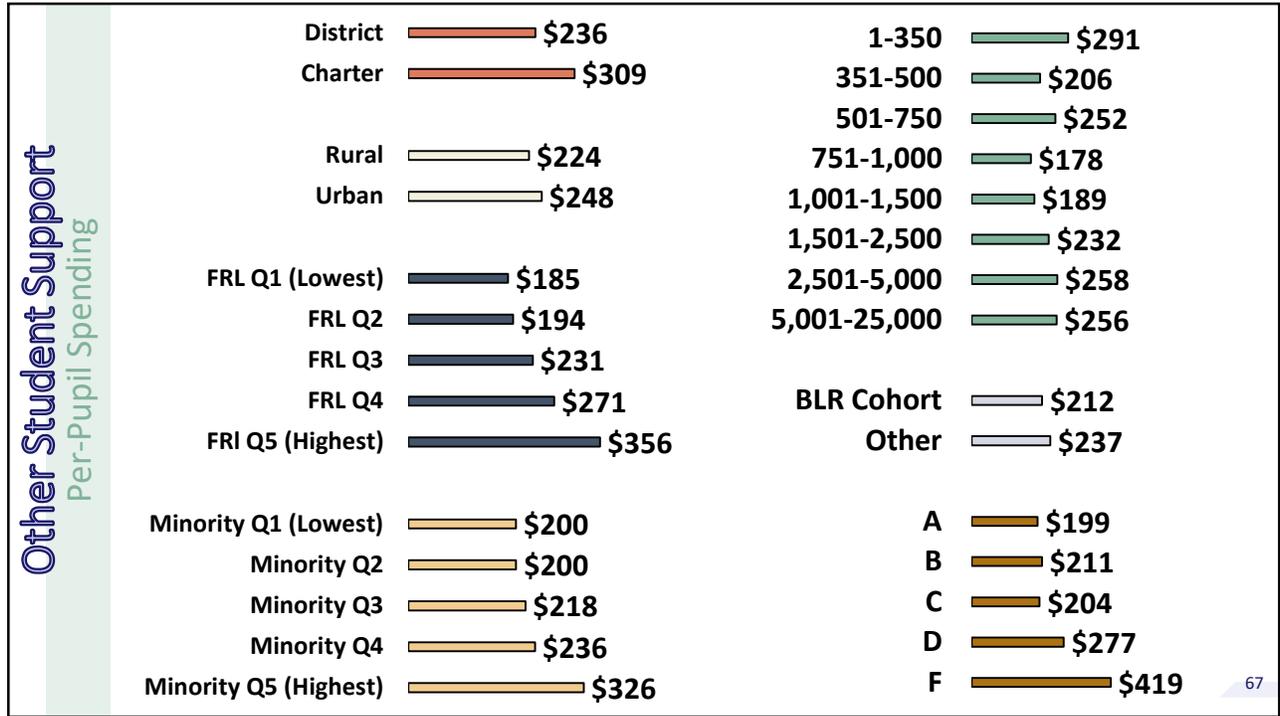
- The matrix funds **.72 FTE positions for other student support**, which includes speech pathology and audiology services, occupational therapy services, and psychological services.
- While there are no specific state standards requiring these individual services, Arkansas accreditation standards do **require** school districts to “offer a full continuum of special education services as required by the Individuals with Disabilities Education Act” (2-F.2).
- Schools are **required** to provide some of these services for special education students whose individualized education program (IEP) calls for them.

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OTHER STUDENT SUPPORT

Function Description	2023 Foundation Expenditures	2023 Total Expenditures
Physical and Occupational Therapy	\$11.1 M	\$38.4 M
Speech Pathology and Audiology Services	\$7.9 M	\$28.3 M
Psychological Testing and Services	\$8.4 M	\$23.7 M
Attendance and Social Work Services	\$2.4 M	\$12.2 M
Parental Involvement	\$898K	\$7.5 M
School Based Mental Health	\$604K	\$3 M
Total	\$31.3 M	\$113.1 M





Research and Best Practices

Other Student Support

2023 Matrix Support Staff-Student Ratio

0.72:500

Professional Association	Recommended Staffing Level
American School Counselor Association	250:1 student to school counselors
National Association of School Psychologists	250:1 for school counselors 500-700:1 for school psychologists 400:1 for school social workers
National Association of Social Workers	250:1 for school social workers, unless working with students with intensive needs, when a lower ration is required

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Arkansas Educators' Feedback

- Mental and behavioral health specialists (not guidance counselors) were among the most frequently cited resources needed.
- Arkansas educators – superintendents, principals, and teachers – all report that the growing student mental health needs go beyond the expertise of guidance counselors and that specific mental health resources, including additional positions for specialized staff, need to be identified.

Survey
Says:

60% reported their districts were in moderate or extreme need of more funding for other student support.

85% have mental health therapists working in schools to provide mental health services directly to students.

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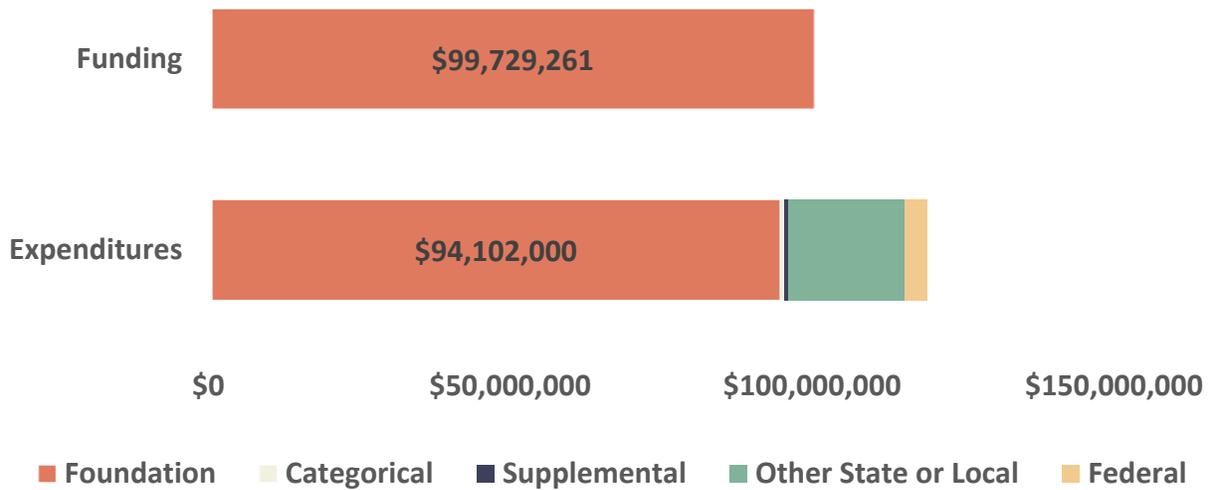
Foundation Funding: **Principal**

2023 / 2024 / 2025	2023 Funding Amount
\$208 / \$211 / \$211	\$99,729,261

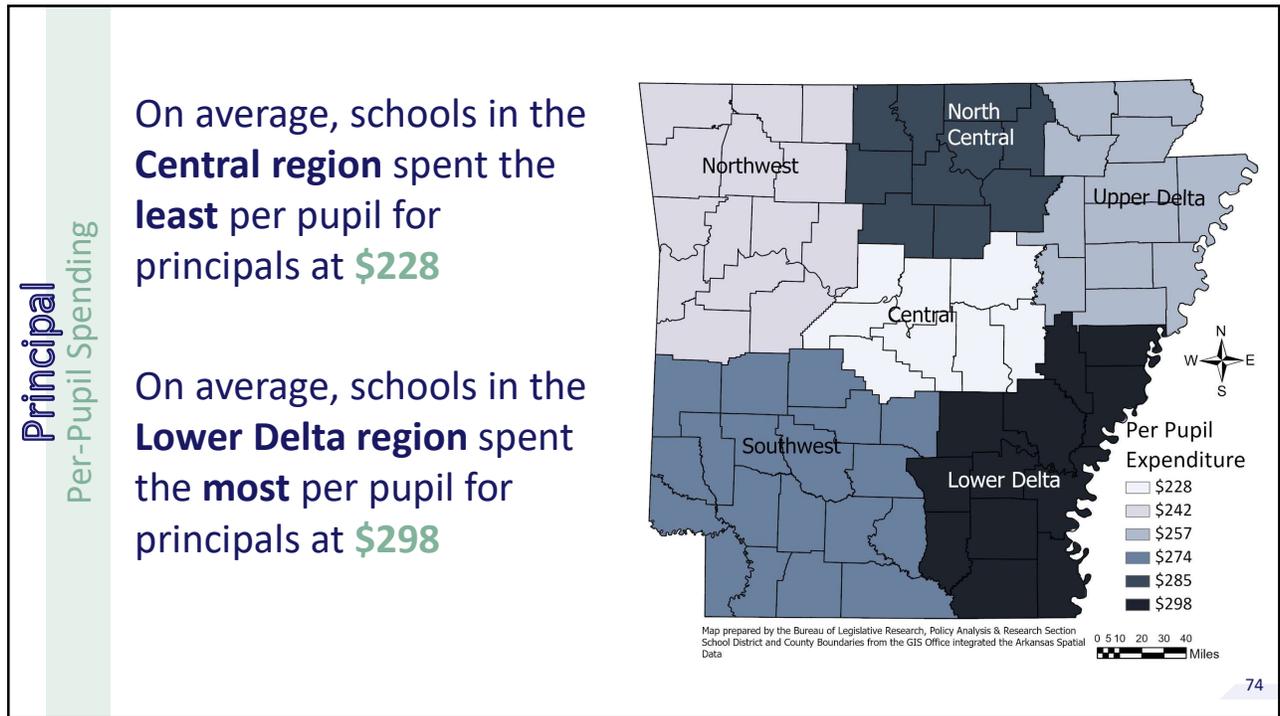
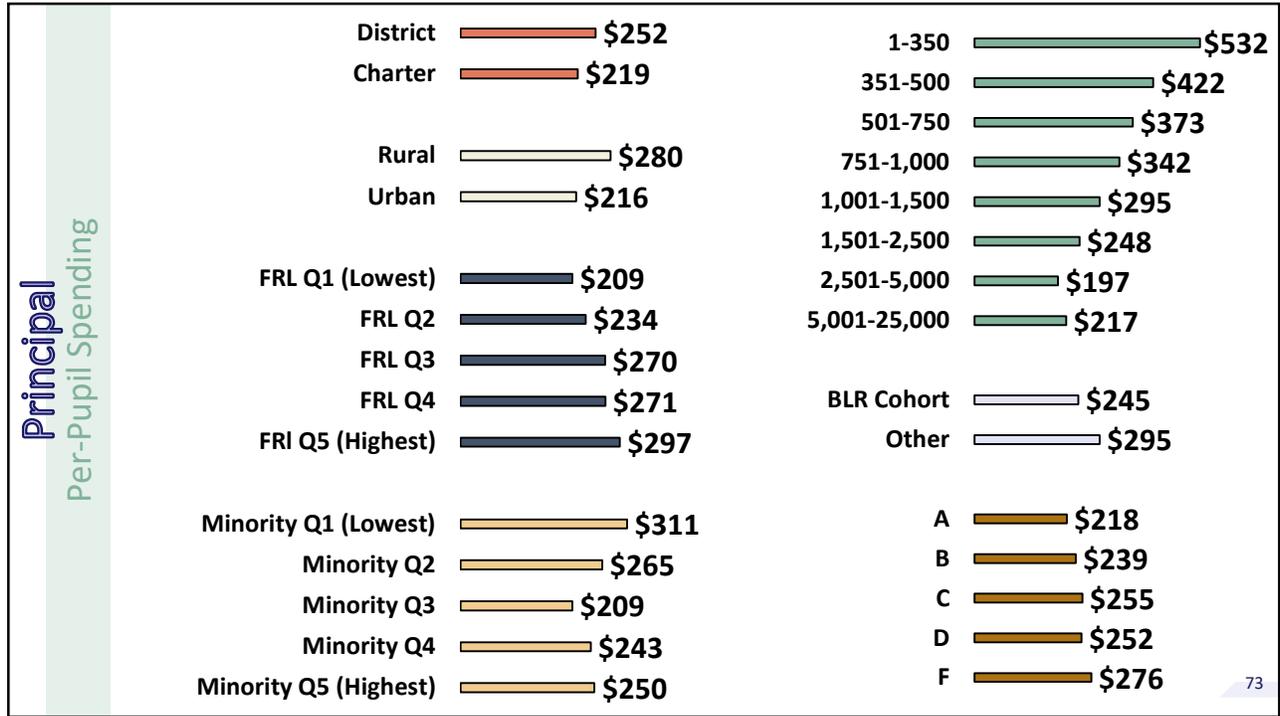
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Foundation Funding vs. Spending: **Principal**



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Research and Best Practices

Principals

- Principals concentrating on “organizational duties”
- Shared leadership—principals seeking and incorporating ideas from staff
- Holding staff accountable while inspiring and supporting them, especially in teaching and learning

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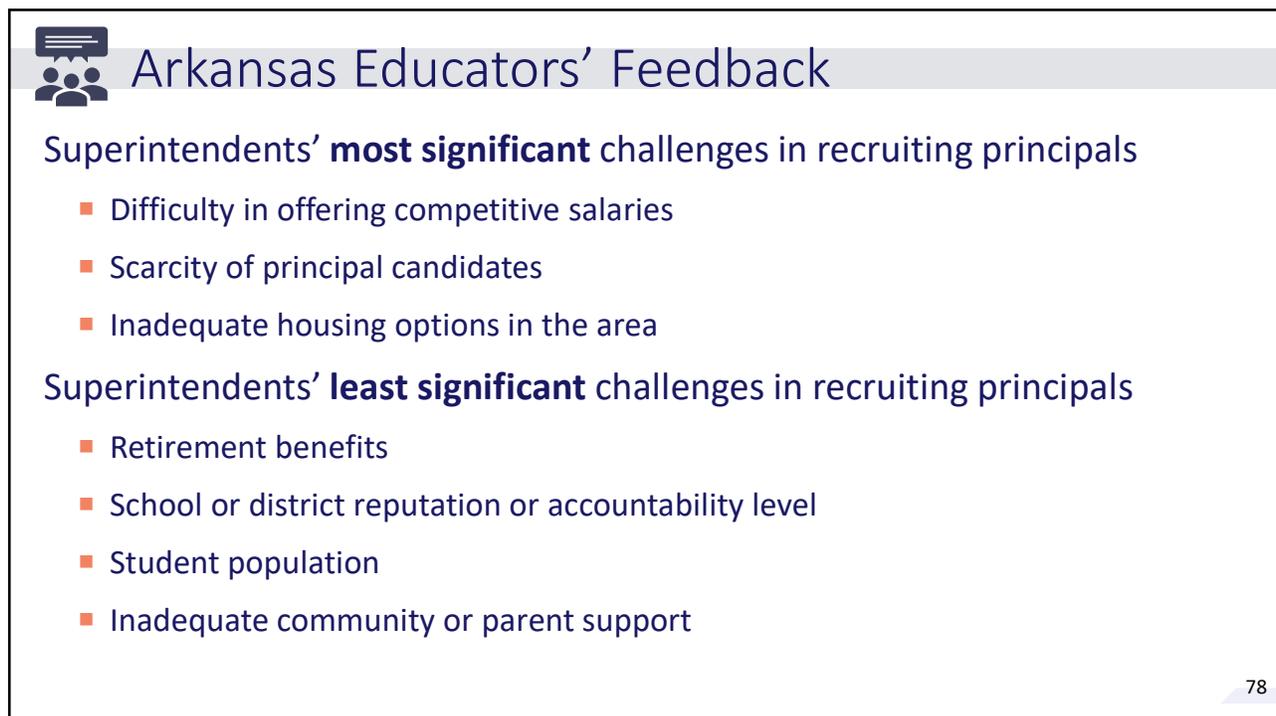
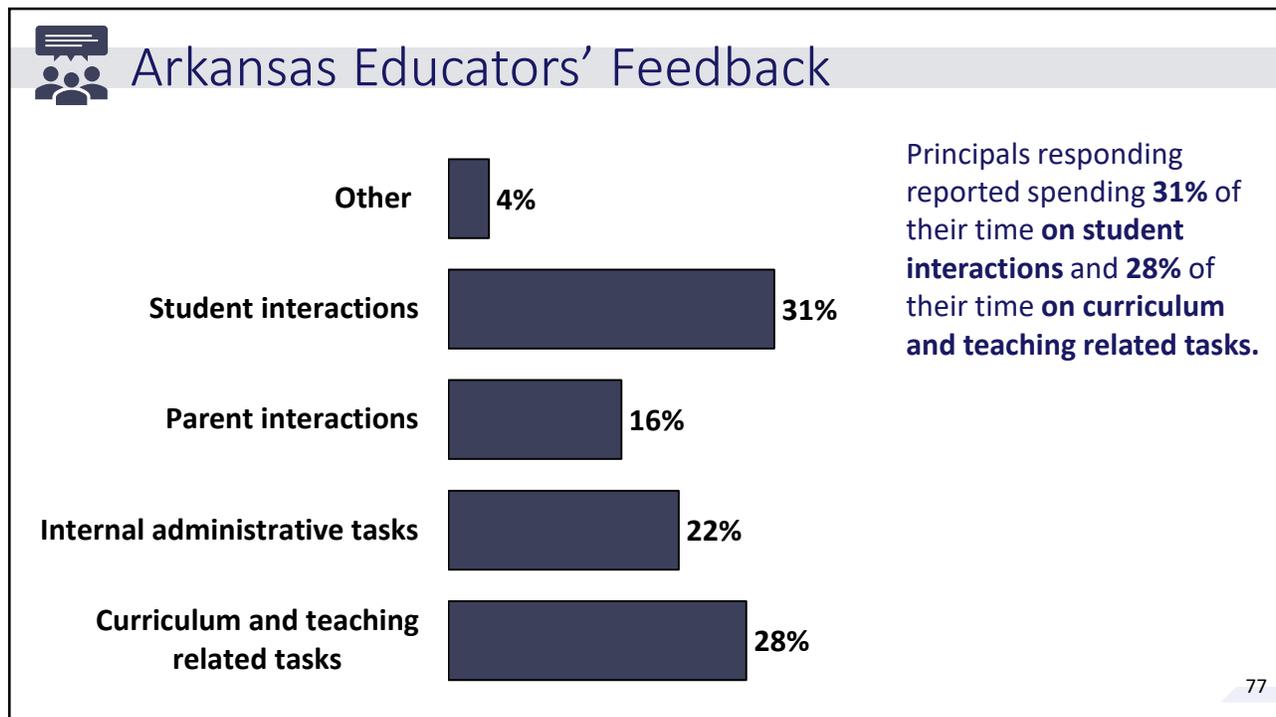


Arkansas Educators' Feedback

Survey
Says:

49% of superintendents reported that their districts were in **moderate** or **extreme** need of more funding for principals.

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Arkansas Educators' Feedback

Superintendents' **most significant** challenges in retaining principals

- Stress/workload
- Difficulty in offering competitive salaries

Superintendents' **least significant** challenges in retaining principals

- Retirement benefits
- School and district leadership

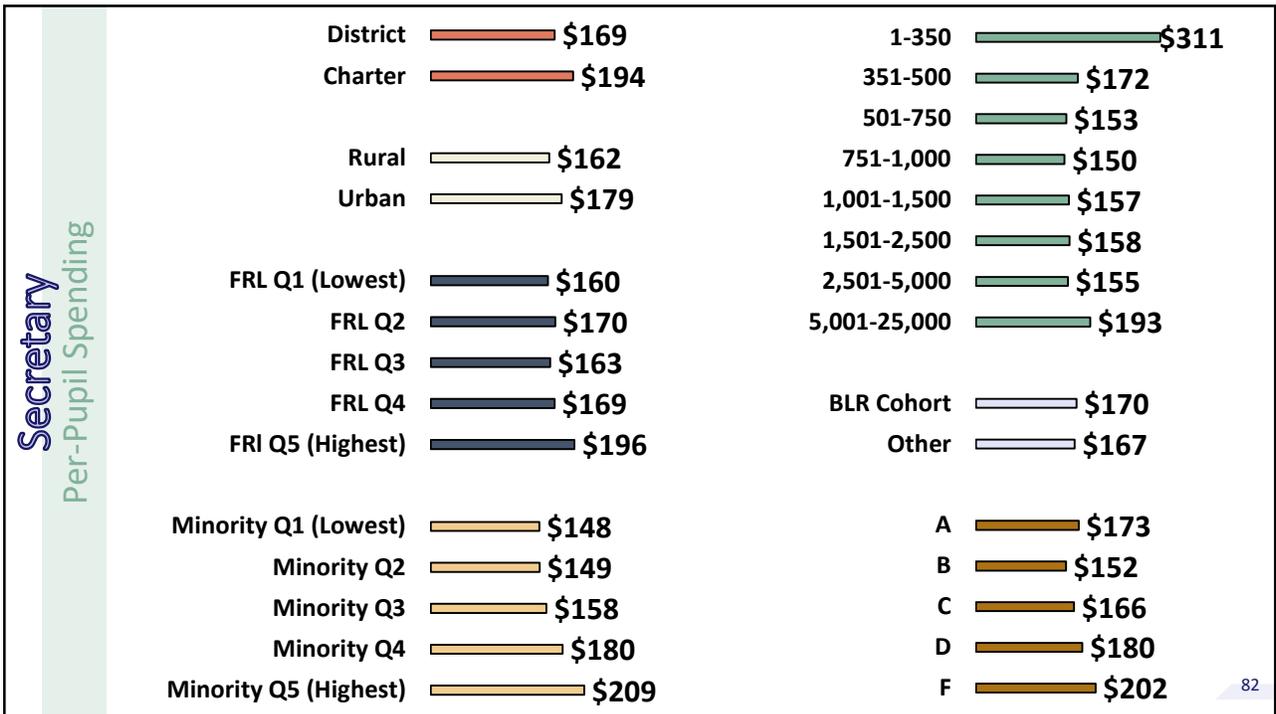
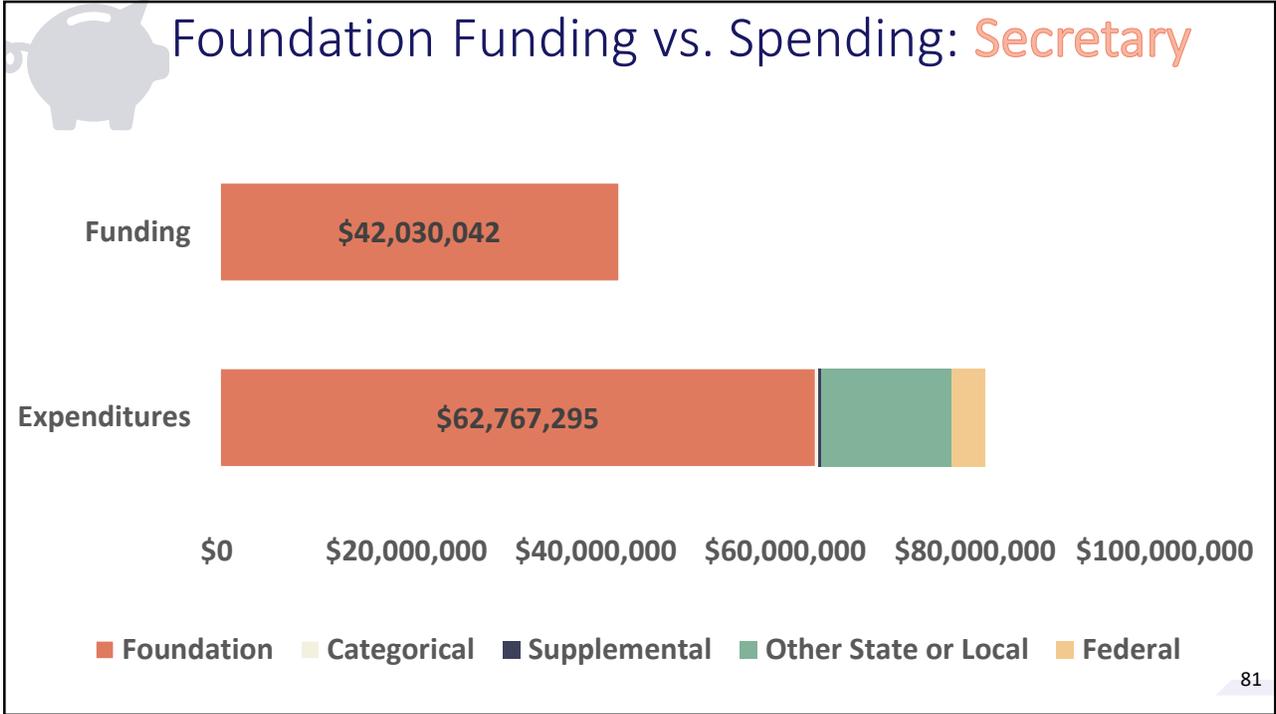
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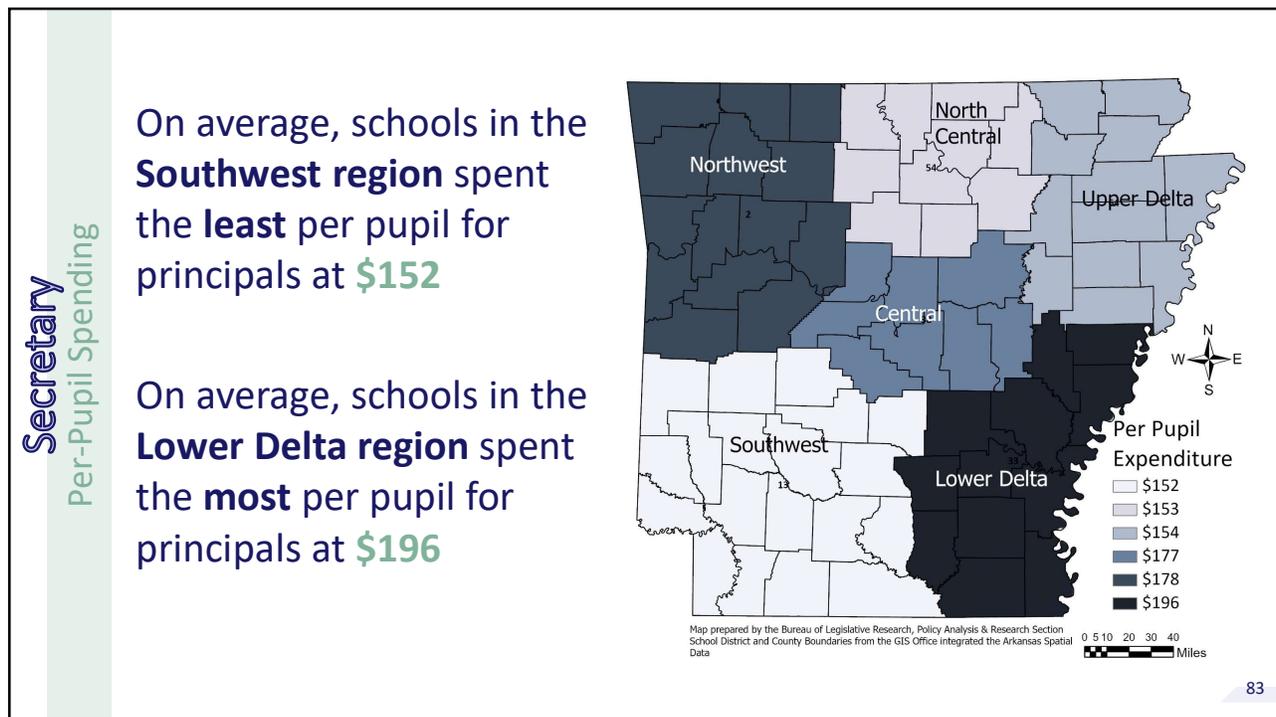


Foundation Funding: Secretary

2023 / 2024 / 2025	2023 Funding Amount
\$86 / \$91 / \$92	\$42,030,042

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 Research and Best Practices

Secretary

- Odden and Picus 2006 and 2014 reports recommended 2 secretaries per 500 students
- Augenblich, Palaich, and Associates noted that case study schools with 400 or more students generally have at least 2 secretaries

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Arkansas Educators' Feedback

Survey
Says:

51% of superintendents reported that their districts were in **moderate** or **extreme** need of more funding for secretaries.

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NEXT UP

RESOURCE ALLOCATION: SCHOOL-LEVEL RESOURCES