Research Brief

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Comparison of Mississippi's Educational Accountability Model to Accountability Models in Four Southeastern States

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Abstract

This research brief compared Mississippi's educational accountability model to the accountability models used in four surrounding Southeastern States (i.e., Alabama, Georgia, Louisiana, and Tennessee). A mixed-methods comparative research design was used to collect and analyze data presented in each state's "*Every Student Succeeds Act* (ESSA)" plan. While the accountability models of all states reviewed were similar in respect to ESSA indicators, major differences were noted when reviewing the distribution of points among indicators regarding proficiency rates/levels on standardized tests (e.g., in Mississippi's model, students are not awarded points for displaying progress whereas in Georgia and Louisiana's models students earn partial points for showing progress towards proficiency even if the target is not met); Mississippi and Louisiana used 4 year graduation rates while Georgia and Alabama use both 4 and 5 year graduation rates; and Louisiana's model was sensitive to an individual student's prior achievement levels, demographics, and factors outside of the teacher's control (i.e., attendance, discipline, free/reduced lunch). Based upon research findings, recommendations for improving Mississippi's model included incorporating a 5 year graduation rate criteria; revising the distribution of points for the "Academic Achievement" and "ELP" indicators; including an indicator that is sensitive to a student's socioeconomic background; simplifying Mississippi's model by condensing the overall number of indicators; and including indicators that gauge school climate and teacher effectiveness.

Introduction

This research brief compared Mississippi's educational accountability model to the accountability models used in four surrounding Southeastern States. Mississippi's accountability model was compared against accountability models in Alabama, Georgia, Louisiana, and Tennessee. The goal of this comparison was to identify key elements in the surrounding states' models that could be used to improve Mississippi's accountability model in terms of accurately and fairly assessing academic performance.

In recent years, Mississippi's public education officials have been working to resolve various issues impacting the effectiveness of its current accountability model. Examples of these issues include using 3 different state test instruments to assess academic performance; identifying and incorporating indicators that accurately measure student academic growth; and complying with federal educational laws and policies such as the "No Child Let Behind Act" and the more recent "Every Student Succeeds Act".[1b, 1c] These and other issues have raised serious questions regarding the effectiveness of Mississippi's current accountability model in assessing the academic performance of students, schools, and school districts. This brief seeks to assist policymakers in identifying and incorporating accountability elements that are being used successfully in states similar to Mississippi. The recommendations presented in this brief are offered as potential strategies to help increase the effectiveness and fairness of Mississippi's educational accountability model.

Accountability Models: Purpose, History, Issues

Accountability is a tool designed to evaluate how well students are performing academically in regards to performance on standardized tests. School accountability serves many purposes such as measuring, documenting, and sharing student academic progress on selected indicators. This information is helpful in regards to keeping stakeholders (for example, state and local education officials, parents, and teachers) abreast on the progress of schools/districts that are achieving and those that need improving.

Accountability has become a major hot button issue in the field of education. For many years, states have been required to design accountability models based upon established requirements from the *No Child Left Behind Act* (NCLB). In short, NCLB focused on accountability measures associated with high standard expectations with an emphasis on serving disadvantaged and "vulnerable" students. For example, NCLB placed great emphasis on student proficiency testing by requiring states to bring all students to the "proficient level" on state tests by the 2013-14 school year. Additionally, the law required states to report results for both the student population as a whole and for particular subgroups of students, including English-learners and students in special education, racial minorities, and children from low-income families.[1]

NCLB has been a major education policy throughout the years until its recent replacement, "*The Every Student Succeeds Act*" (ESSA), was passed in December 2015. States

began implementing ESSA plans in the 2017-18 school year. Under ESSA, states can set their own goals, however these goals must address proficiency on tests, English-language proficiency, and graduation rates.[2] ESSA requires states to set achievement goals that measure whether students are showing improvement.[3] Similar to NCLB, the ESSA goals must be set for all students including low-income students, students from major racial/ethnic groups, students with disabilities, and English learners.[2] ESSA requires states to set "ambitious" goals for students who are furthest behind to help those students catch up and close the achievement gaps with other students.[3] Each state must then rate schools based on how they perform on mandated goals and other indicators for all students and each student group.[4] ESSA requires each state to choose a minimum of five ways to measure school performance[3]. Listed below are the required indicators:

- **Academic achievement** – proficiency on assessments in reading and math
- **Other academic indicator**- student growth or another indicator that is valid
- **English language proficiency**- progress of English language learners toward proficiency
- **High School Graduation Rates**
- **Additional indicator of school quality**- at least one indicator of school quality or success, such as measures of safety, student engagement or educator engagement[4,5]

States are allowed flexibility in designing and implementing their accountability models. Because of this, states utilize a variety of ways to evaluate student performance including letter grades, numeric levels, categories, descriptor labels, and color coding[6]. States determine exactly how much each indicator will count in their accountability ratings, but academic achievement and English proficiency must each carry substantial weight.[4]

While accountability models are, in theory, designed to be fair and impartial for all students, they sometimes have serious flaws that impact a particular group of students. Research conducted by the Mississippi Urban Research Center found that Mississippi's rating system used to evaluate students' academic performance is biased towards students from low socioeconomic backgrounds.[7] The accountability scores correlated significantly with the percentage of students receiving free or reduced lunch. Furthermore, regression analysis revealed that accountability scores appear to be an index of poverty (60% of the change in the accountability score can be explained by students participating in the free or reduced lunch program)[7,8] In Georgia, researchers concluded that as the percentage of African American and "Free and Reduced Lunch Price" students increases, and the percentage of White students' decreases, school performance decreases.[6] The number and percentage of "Free and Reduced Lunch" participants are indicators of poverty which suggests that accountability models are not always impartial and require education officials to revisit and revise their models to account for such discrepancies.

Research Methods

The following section describes the research methods and procedures used to conduct this study and derive its recommendations:

Research Design. A mixed-methods comparative research design was used to analyze quantitative and qualitative data collected for this study.

Description of Sample. Five states were selected for comparison in this study. The following table provides a comparative description based upon enrollment and other demographic data.

State	Total Enrollment	% Black	% White	% Hispanic or Latino	% Asian	% Other Races
Mississippi	477,633	48.54	44.19	3.75	1.07	2.44
Alabama	726,924	32.75	54.53	7.95	--	3.28
Georgia	1,898,534	38.11	39.01	15.14	3.95	3.76
Louisiana	720,126	43.59	44.64	6.96	1.59	3.20
Tennessee	999,701	24.1	63.4	9.7	--	2.76

Sources: Mississippi Department of Education[9]; Alabama State Department of Education[10]; Student and School Demographics[11]; Louisiana Department of Education[12]; and Tennessee Department of Education[13]

Data Source/Materials. States are required to design plans that align with ESSA standards and regulations for implementation in the 2017-2018 school year. The following documents were assessed for comparative purposes:

- Mississippi Public School Accountability Standards (2018)
- Mississippi Consolidated State Plan (2018)
- Alabama's Revised State Template for the Consolidated State Plan (2018)
- Georgia's State Plan for the Every Student Succeeds Act (2017)
- Louisiana's Elementary & Secondary Education Plan (2017)
- Every Student Succeeds Act: Building on Success in Tennessee (2018)

Procedures. Secondary data from each state's "Every Student Succeeds Act" (ESSA) plan was accessed and compared. ESSA indicators from each states' accountability plan were extracted and compiled into comparative tables which included descriptions of each indicator (See Appendices A-E). Additionally, Mississippi's Public School Accountability Standards (2018) were included to determine the scoring of indicators for comparative purposes. All ESSA plans accessed were approved by the U.S. Department of Education and are currently in use as of the 2018-2019 school year.

Major Findings

To help establish a context for examining selected accountability models, the states were compared across three common indicators: per pupil expenditures; instruction spending per pupil; and total educational spending. Of the five states, Louisiana spent the highest amount per pupil ($11,038) and instruction per pupil ($6,199), whereas Mississippi spent the least amount per pupil ($8,702) and instruction per pupil ($4,951). In regards to total education spending, Georgia spent the highest amount ($17,118,329,000) whereas Mississippi spent the least amount ($4,246,156,000) (See Table 1).

Table 1
Public Spending Per Student by State

State	Total Per Pupil Spending	Total Spending (in 000s)	Instruction Spending Per Pupil
Alabama	$9,236	$6,907,539	$5,257
Georgia	$9,769	$17,118,329	$5,975
Louisiana	$11,038	$7,305,990	$6,199
Mississippi	$8,702	$4,246,156	$4,951
Tennessee	$8,810	$8,886,616	$5,406

Source: http://www.governing.com/gov-data/education-data/state-education-spending-per-pupil-data.html

Table 2 displays ESSA indicators by state and how each state measures academic performance based on those indicators. As previously stated, the "Academic Achievement" indicator must measure English/Reading and Math proficiency levels of students. The "Other Academic Indicator" is typically used to gauge growth of students from year-to-year, and English Proficiency examines how students are meeting proficiency levels/standards as set by each state. Listed below are differences and similarities of the accountability components utilized by the states in this study:

- All selected states assign five letter grades (A, B, C, D, and F) to schools based upon performance on selected indicators listed in their accountability model.
- All selected states have a combined component to measure academic achievement except Mississippi, which uses two separate components (Reading Proficiency and Math Proficiency).
- All selected states have similar "Other Academic Indicators" which measure student growth in standardized tests from year-to-year. Mississippi utilizes four separate components to measure student growth, whereas the other Southeastern states utilize 1-2 components. Mississippi's components looks at growth for all students and the lowest performing students.
- All selected states use proficiency rates/levels on standardized tests, however differences were noted when examining the distribution of points associated with each indicator. For example, in Mississippi's model, students are not awarded points for displaying progress. Those students are required to meet a certain proficiency level to earn points, whereas in Georgia's and Louisiana's models, students earn partial points for showing progress towards proficiency, even if the target is not met.
- Of all the selected states, Louisiana appeared to be the only state to include a measure in their "Academic Achievement" component that was sensitive to factors outside of the teacher's control (i.e., attendance, discipline, free/reduced lunch). Louisiana's nationally

Table 2
ESSA Indicators by State

ESSA Indicators	AL	GA	LA	MS	TN
Academic Achievement	Student Proficiency	Content Mastery	Assessment Index	Reading Proficiency Math Proficiency	Math and ELA Achievement
Other Academic Indicator	Learning Gains	Progress Closing Gaps	Growth Index	Reading Growth-All students Reading Growth-Lowest Performing Student Math Growth-All Students Math Growth-Lowest Performing Students	Growth
English Language Proficiency(ELP)	ELP	ELP growth (average increase in performance levels)	ELP	Progress to Proficiency	English Language Proficiency Assessment
Graduation Rate	4 & 5 yr.	4 & 5 yr.	4 yr.	4 yr.	4 yrs. and a summer
Additional indicator of school quality	Attendance (Chronic Absenteeism) College/Career Ready Rate	Readiness	Dropout Credit Accumulation Index ACT/WorkKeys Strength of Diploma	Science Proficiency U.S. History Proficiency College and Career Readiness Acceleration	Chronically out of School Science Achievement Ready Graduate

recognized value added model is sensitive to an individual student's prior achievement
levels and demographics.[14]

- Differences were noted when examining graduation rates. Of all the selected states,
  Mississippi and Louisiana were the only states to use 4 year graduation rates. Georgia
  and Alabama both used 4 and 5 year graduation rates (See Table 2).
- The accountability components differ across grades levels for all five states. Typically,
  indicators such as graduation rates and "Additional indicator of school quality" are
  included in the models for middle and high schools.
- Overall, the other states' accountability models are more condensed in that they have
  fewer indicators in their models. Mississippi's list of accountability indicators exceeded
  the number of indicators listed by other states in this study.

Discussion

Accountability models in public education are extremely important and should be
designed to promote the improvement of student academic performance and achievement. The
model a state designs communicates to teachers, administrators, and others what is expected. It is
not uncommon for states to set high standards for students when designing their models, but
states should ensure their schools are adequately equipped with the proper resources to achieve
desired results.

Essentially, the accountability models examined in this study are all quite similar. The
difference is in how students are awarded points based on their performance on specified
indicators. The indicators are scored using a variety of scaling measures. The most notable
difference was between Georgia, Louisiana, and Mississippi's point distribution system. As
previously stated, Georgia and Louisiana's models allow students to earn points for displaying
improvement, even if they do not necessarily meet the target standard. This applies to the states'
"Academic Achievement", "Other Academic", and "English Language Proficiency" (ELP)
indicators. Conversely in Mississippi, students are only awarded points for displaying
improvement on the "Other Academic Indicator" (which measures student growth). In this
component, schools can also earn additional points/weight for students who remain in the
advanced level from one year to the next. For Mississippi's "Academic Achievement" and
"ELP" indicators, students must reach proficiency/proficient levels to earn points. No partial
points are awarded to students who display growth towards proficiency on those indicators.

Louisiana's and Georgia's models appear to place a stronger emphasis on growth and
upward movement/mobility. Those models communicate to students, teachers, and schools that
their efforts and improvements are noticed and rewarded throughout the accountability model. It
appears that Mississippi's model encourages advancement, but it does not reward students,
teachers, or schools for small victories and improvements. High-stakes accountability models
can be very impactful, however they should also promote gradual progress. A model that rewards
gradual improvement over time may yield better results than an all-or-nothing model.

Differences were also noted in the states' selection of graduation rates. Interestingly,
other states such as Alabama and Georgia utilized both 4 and 5 year graduation rates. This allows

schools who do not graduate students in the traditional 4 year period to still earn points and be recognized for their achievement. Mississippi currently uses a 4 year graduation rate. At their discretion, states are allowed to include one or more extended years into their graduation rate. States must show how adding an extended year relates to their long-term goals. In the Mississippi Board of Education's Strategic Plan, the second goal states that "Every student graduates from high school and is ready for college and career."[15] Extending the graduation length of time can potentially increase graduation rates in the state and decrease dropout rates, further assisting with the achievement of the goal set by the Board of Education.

Lastly, it is important for all accountability models to ensure that all students are evaluated fairly. Mississippi's model reports results for the lowest performing subgroups under the "Other Academic" Indicator. And as required by ESSA, it also reports performance results for economically disadvantaged students. However, Mississippi's model is not sensitive to socioeconomic factors when evaluating and assessing students' academic performance as shown by research.[6, 7] In contrast, Louisiana's nationally recognized value-added model shows the extent to which the student's progress was on target with what would be expected by looking at factors that are outside of the school's purview (i.e., free/reduced lunch, attendance).[14] This ensures that all students, especially those from disadvantaged backgrounds, are evaluated fairly. Incorporating Louisiana's approach could help improve the effectiveness and success of Mississippi's accountability model by being more responsive to the needs of economically disadvantaged students.

Recommendations

The following recommendations are proposed to help improve Mississippi's accountability model. These recommendations are being offered as potential strategies to help increase the effectiveness of how students, schools, and school districts are evaluated. The implementation of these recommendations can positively impact students and can paint a brighter picture of student academic performance in Mississippi. These recommendations include:

- Education officials should incorporate a 5 year graduation rate into the model. Some students may need more time to master content and graduate. By extending the graduation time, schools/districts who graduate students in 5 years will be able to earn points and contribute to an increase in overall graduation rates.

- Revisit distribution of points for "Academic Achievement" and "ELP" indicators. Allow schools to earn partial points if students move up a level. This will encourage and facilitate gradual progress by allowing students to earn partial points for moving up a level even if they do not meet the proficient level.

- Include a measure that is sensitive to a student's socioeconomic background. This will allow the state to effectively and accurately assess the true academic growth of students while also taking into account things that are outside of school districts' control.

- Simplify the model by grouping indicators together. For example, combining the 4 separate indicators which measure proficiency (Reading Prof, Math Prof, Science Prof, and U.S. History Prof).

- Include indicators that gauge school climate and teacher effectiveness. These indicators will capture the environment in which students are learning and whether they are conducive to learning.

Future Research

In this brief, accountability models of five Southeastern States were compared for the purpose of identifying recommendations that could help improve Mississippi's current educational accountability model. The accountability models were compared analyzing ESSA indicators and the distribution of points for those indicators. Future research is needed to delve deeper and compare the effectiveness of the models and how they serve disadvantaged students and school districts in high poverty areas. That research could be helpful in identifying schools and districts that have best practices for educating vulnerable student populations, and could help shed light in terms of what works best with vulnerable populations. It is critical that states ensure their models are fair and just for all students, especially disadvantaged and vulnerable students. Future research in this area could provide answers to the question of "How well does each state's accountability model measure the academic progress of disadvantaged students?"

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Appendix A
Alabama ESSA Indicator Descriptions

Indicator	Description
Student Proficiency	Proficiency for Reading and Math (3rd-8th Grades); Determined based on the percentage of students in the areas of reading and math
Learning Gains	Growth for Reading and Math (3rd- 8th Grades); determined based on individual students who demonstrate improvement in reading and math from one year to the next
English Language Proficiency	A student's overall proficiency level of the two most current test scores are compared
Attendance (Chronic Absenteeism)	Percentage of students having 15 or more absences in a given school year
Graduation Rate	Determined based on the percentage of high school students who graduate within 4 or 5 years of first entering 9th grade
College/Career Ready Rate	Achieving a benchmark score on ACT; scoring a 3,4, or 5 on an Advanced Placement exam/ scoring a 4,5,6, or 7 on an International Baccalaureate exam; scoring silver level or above on ACT Work Keys; earning a transcripted college credit while still in high school; earning an Industry Credential; or being accepted for enlistment into any branch of the military

Appendix B
Georgia ESSA Indicator Descriptions

Indicator	Description
Content Mastery	Achievement score in English Language Arts (ELA), math, science, and social studies based on student performance on the statewide assessment systems
Progress and ELP	Progress in ELA and math, as measured by student growth percentiles; progress toward English language proficiency as measured by English Learners students moving from one State-defined performance band to a higher performance band
Closing Gaps	Percentage of achievement targets met among all students and all subgroups of students
Readiness	Literacy: Percentage of students demonstrating reading comprehension at or above the mid-point of the College and Career Ready "Stretch" for each grade level or course

Student Attendance: Percentage of students absent less than 10% of enrolled days

Beyond the core: Percentage of students earning a passing score in specified enrichment courses

Accelerated enrollment: Percentage of graduates earning credit for accelerated enrollment via Dual Enrollment

Pathway completion: Percentage of graduates completing an advanced academic fine arts of world language pathway

College and career readiness: percentage of graduates entering TCSG/USG without needing remediation; Achieving a readiness score on the ACT, SAT, 2 or more AP exams, or 2 or more IB exams; Passing an end of pathway assessment (nationally recognized industry credential); completing a work-based learning experience |
| Graduation Rate | Percentage of students graduating in four and five year cohorts |

Appendix C
Louisiana ESSA Indicator Descriptions

Indicator	Description
Assessment Index	The assessment and End of Course (EOC) indices capture student achievement on grade 3-8 and high school state assessments in English language arts and math
Growth Index	Captures student growth on ELA and math grade 3-8 assessments as measured by growth towards proficiency or student growth percentile using Louisiana's nationally-recognized value-added model
Graduation Rate	Measures the four-year cohort graduation rate
English Proficiency	Awards points for all English learners making annual progress toward attaining English language proficiency as defined by meeting exit criteria and/or meeting or exceeding annual targets based on a student's baseline proficiency level
Strength of Diploma	Measurement of credentials above and beyond the cohort graduation rate; is included in the scores of all schools with a graduating class and provides an indicator of student participation and performance in rigorous coursework such as Advanced Placement, dual enrollment, etc.
ACT/WorkKeys Index	All juniors take the ACT, and students may also take the WorkKeys; Students highest scores through senior year are included in the ACT/WorkKeys index
Dropout/Credit Accumulation Index	Measures credit accumulation through the end of 9th grade year (used to measure 8th grade schools); measures the degree to which middle schools have prepared students to be successful in high school based on their quality of work at the class level

Appendix D
Mississippi ESSA Indicator Descriptions

Indicator	Description
Reading Proficiency Math Proficiency	Determined by the percentage of students who achieve performance/proficiency and above on statewide assessments
Reading Growth- All Students Math Growth- All Students	Determined by whether or not a student increases in performance/proficiency levels from one year to the next
Reading Growth- Lowest Performing Students Math Growth- Lowest Performing Students	The Lowest Performing Student subgroup will be determined by identifying the percentage (e.g., 25%) of students, as defined by Miss. Code Ann. § 37-17-6, who are the lowest performing students in a given subject area.
Science Proficiency U.S. History Proficiency	Determined by the percentage of students who achieve a performance/proficiency level and above on statewide assessments
Graduation Rate	The number of students who graduate in four (4) years from a school and LEA with a regular high school diploma divided by the number of students who entered four (4) years earlier as first-time 9th graders
Progress to Proficiency	Students are assigned an annual target score based on their initial year of ELP assessment and the corresponding score required to meet exit criteria in five years or less
College and Career Readiness	Calculated from performance on the ACT; The College & Career Readiness component will be comprised of a Mathematics and an English/Reading component
Acceleration (Participation and Performance Combined)	Percentage of students taking and passing the assessment associated with the accelerated courses such as Advanced Placement (AP), International Baccalaureate (IB), Advanced International Certificate of Education (AICE), or SBE approved industry certification courses

Appendix E
Tennessee ESSA Indicator Descriptions

Indicator	Description
Math and ELA Achievement	Percent of students performing at on track or mastered at the school-level
Science Achievement	Percent of students performing at on track or mastered at the school-level
Growth	Measures an individual student's growth, not whether or not a student is proficient (measure growth from one year to the next)
Graduation Rate	Percent of adjusted ninth grade cohort that graduates within four years and a summer
Ready Graduate	Percent of students who graduate and score 21+ on ACT
Chronically Out of School	Percent of students who are chronically out of school due to absences or out of school suspensions
English Language Proficiency Assessment	The percentage of students meeting or exceeding the growth standard based on prior English proficiency