

Research Brief

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The Impact of School District Consolidation on Academic Achievement in Mississippi

Dawn Camel, B.A., Evaluation Specialist
Sam Mozee, Ph.D., Interim Executive Director

Abstract

This research brief investigated the impact of school district consolidation on academic achievement in Mississippi as measured by standardized test scores. The Mississippi Department of Education's website provided source data on 10 consolidated school districts in Mississippi. The years 2011 to 2017 provided the timeframe for this study. A quasi-experimental research design help guide analysis activities. An independent samples t-test procedure compared standardized test scores before district consolidation (Pre-) and after district consolidation (Post-) in the Basic, Minimal, Proficiency, and Advanced test categories. Research findings indicated significant differences for Language Proficiency ($t(118)= 10.834, p <.05$), Language Advanced ($t(118)= 3.163, p <.05$), Math Minimum ($t(117)=3.346, p<.05$), Math Basic ($t(117)= -3.261, p<.05$), Math Proficiency ($t(117)= 12.634, p <.05$), and Math Advanced ($t(117)= 4.768, p <.05$). Findings indicated no statistically significant differences for the test category Language Minimum ($t(73)=.719, p>.05$) and Language Basic ($t(87)= 3.63, p >.05$). Overall, t-test findings indicated test scores from Pre-consolidation to Post-consolidation significantly decreased for Language Proficiency, Language Advanced, Math Minimum, Math Proficiency, and Math Advanced. Only for the Math Basic Category did an increase in pre- to post-test scores emerge. In light of this study's findings, and assuming the primary goal of school consolidation is improving student academic performance, this study recommends policymakers proceed cautiously before mandating future school consolidations. The research evidence suggests school consolidation may not be the best approach to improving academic performance in some small rural school districts.

Introduction

This research brief examined the impact of school district consolidation in Mississippi. It continues a series of research conducted by the Mississippi Urban Research Center (MURC) examining education in Mississippi. Previous research briefs in this series investigated the relationship between highly qualified teachers and students' academic performance; differences between rural and urban school districts relative to language and math scores; and the relationship between academic performance and school operating budgets. This research brief investigated the impact of school district consolidation on academic achievement as measured by

standardized test scores. The research question guiding this study concerns whether academic performance (as measured by standardized tests) increased or decreased after consolidation. In recent years, Mississippi has moved forward with consolidating several school districts in mainly rural areas. Providing additional research on the academic impact of such consolidations can help policymakers decide about conducting future consolidations. For the purposes of this research study, “school” and “district” consolidation are synonymous.

Issues Surrounding School Consolidation

By way of definition, school consolidation involves the joining of two or more schools or districts into one (Alan, 2008). Consolidation arose as a cost-effective solution to operate schools more efficiently and economically (Alan, 2008). As states continue to face budget cuts in education, more are moving to consolidate districts as a means of decreasing the cost of education. To this end, school district consolidation has been steadily increasing over the years.

In theory, school consolidation is very appealing but there are two opposing sides to this issue consisting of supporters and opponents. Supporters of consolidation lists an array of benefits to the “combined” consolidated schools. One popular cited benefit is the fiscal savings from decreasing operational costs (Alan, 2008). When schools are consolidated, unused school buildings can be sold or used for other purposes, and maintenance and utility costs are reduced (Alley, 2019). Additionally, because consolidation usually combines classes, fewer teachers gain employment. Thus, producing additional savings in salary, pensions, and benefits (Alan, 2008). Another popular cited benefit of consolidation is the ability to enhance the educational quality of schools by enabling the combined schools to offer more courses and hire more diverse faculty (Alley, 2019). Also, larger school districts can possibly expand their extracurricular activities. Because smaller schools have lower enrollment than larger ones, they may not be able to offer the variety of extracurricular activities that larger school districts can provide (Alan, 2008).

Opponents of consolidation believe the ends do not justify the means, nor the benefits outweigh the costs. A major disadvantage of school consolidation is the loss of identity to the surrounding communities (Alley, 2019). Consolidation usually involves rural, smaller towns losing a school. Many rural communities today lack theaters and shopping malls, so athletic events and school-sponsored activities become the key element of their community (Green, 2013). Often when the consolidation occurs, the community has no attachment to the consolidated district and as a result, a social void usually arises when consolidation occurs. Another common disadvantage cited is the economic impact on the community itself. Some of the money saved because of consolidation results from cutting jobs. Small-town schools are often one of the largest employers in the town, and when a school closes, it can have a negative effect on the community (Alley, 2019).

Consolidation in Mississippi

According to the Mississippi Professional Educators (MPE) Report *School District Consolidation in Mississippi*, the number of school districts in Mississippi have decreased from 152 in 2010 to 144 as of 2016, with most of the consolidation merging poor and/or minority districts (MPE, 2016). The MPE report states that Mississippi’s previous governor, Haley Barbour, created the Commission on Mississippi Education Structure in 2009 (MPE, 2016). The Commission’s primary responsibilities involved recommending school districts for elimination, and calculating projected savings from those eliminations (Commission Formed to Recommend Consolidation in Mississippi, 2010). The Commission estimated reducing the number of school

districts from 152 to 100 would save \$65 million (Commission Formed to Recommend Consolidation in Mississippi, 2010) (MPE, 2016). Details regarding whether the savings would be yearly or over several years were not provided. However, included in the MPE report was a statement from one consultant (Dr. John Augenblick) to the commission. Dr. Augenblick stated there was no research available to prove that consolidation would result in immediate financial savings; more efficient schools; or greater academic achievement (MPE, 2016).

From 2014-2018, approximately 16 school districts have been consolidated in Mississippi. (MPE, 2016). Furthermore, legislators cited various reasons for consolidations, including low student enrollment, poor student performance, and lack of student growth (MPE, 2016). Mississippi’s current Governor, Phil Bryant, signed school consolidation legislation that will merge eight Mississippi school districts into four, citing that “. . . we need to make sure we are as efficient as we can be in state government, that includes making sure we focus on getting the resources into the classrooms where they’re most needed” (Ciurczak, 2016). Cost savings and improved efficiency are worthy goals when considering the consolidation of school districts. However, less clear is whether consolidation positively or negatively impacts student academic achievement. The following sections provide evidence seeking to answer this question.

Methods

Research Design. This study used a quasi-experimental quantitative research design to compare school district’s test scores.

Description of Sample. The Mississippi Department of Education’s website provided data for the 10 school districts included in this study. Data availability determined the selection of the 10 districts. The school districts examined West Bolivar, Benoit, North Bolivar, Shaw, Mound Bayou, Sunflower County, Indianola, North Bolivar Consolidated, West Bolivar Consolidated, and Sunflower Consolidated. Table 1 displays the pre-/post-consolidation methodology.

- North Bolivar School District and Mound Bayou into the North Bolivar Consolidated School District
- Benoit School District, West Bolivar School District, and Shaw School District into the West Bolivar Consolidated School District
- Sunflower County School District, Indianola School District, and Drew School District into Sunflower Consolidated School District

Table 1- Pre- to Post-Consolidation of School Districts

Pre-Consolidation District		Post-Consolidation
North Bolivar Mound Bayou	→	North Bolivar Consolidated
Benoit West Bolivar Shaw	→	West Bolivar Consolidated
Sunflower Indianola *Drew	→	Sunflower Consolidated

*Drew School District was excluded from analysis because of insufficient data.

Procedures. Descriptive and independent t-test techniques provided the basis for comparing school district data. Mathematics and Language scores for grades 3-8 from the Mississippi Curriculum Test, 2nd Edition (School Years 2011-2013) and the Mississippi Academic Assessment Program (MAAP) (School Years 2015-2017) measured student achievement. District level percentages in the Basic, Minimal, Proficiency, and Advanced test categories provided data for the independent samples t-test procedure. For the pre-test categories, omitted was the Level 3 “Adequate Understanding” category; therefore, it was omitted from this analysis.

Results

An independent samples t-test was conducted for each test category (e.g., Language Minimum, Math Minimum) to compare standardized test scores before district consolidation (Pre-) and after district consolidation (Post-). Findings indicated no statistically significant differences for the test category Language Minimum ($t(73)=.719, p>.05$) and Language Basic ($t(87)= 3.63, p >.05$). However, statistically significant differences emerged for test categories Language Proficiency ($t(118)= 10.834, p <.05$) and Language Advanced ($t(118)= 3.163, p <.05$).

This same pattern followed when analyzing Math test score categories. There were statistically significant differences in the test scores for Math Minimum ($t(117)=3.346, p<.05$), Math Basic ($t(117)= -3.261, p<.05$), Math Proficiency ($t(117)= 12.634, p <.05$), and Math Advanced ($t(117)= 4.768, p <.05$). Table 2 displays the overall means for Pre- and Post-test scores by test category.

Table 2 - Pre and Post Mean Scores by Test Categories

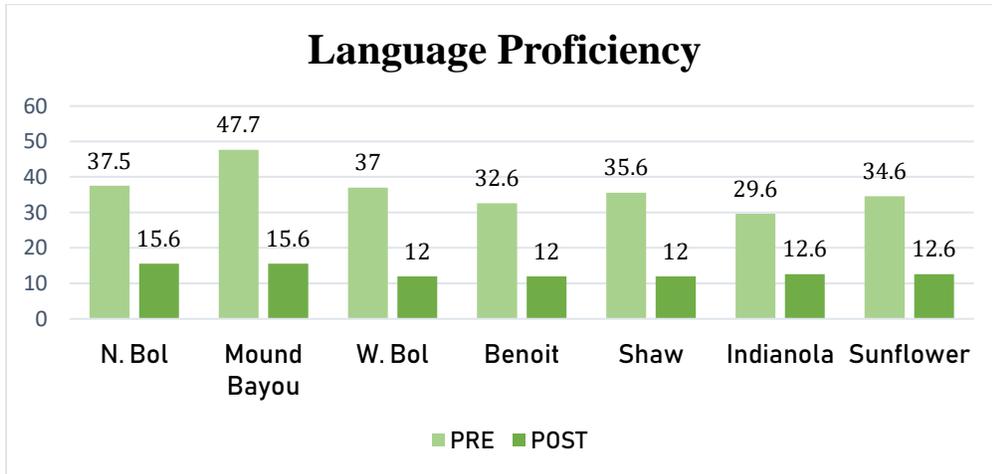
	PRE- Mean (std)	POST- Mean (std)
Language Minimum	19.17 (9.35)	17.91 (8.49)
Language Basic	39.42 (10.57)	33.03 (7.97)
Language Proficiency ^a	36.39 (12.40)	13.38 (4.30)
Language Advanced ^a	5.00 (5.50)	2.03 (1.85)
Math Minimum ^a	20.63 (13.04)	12.95 (6.58)
Math Basic ^a	31.91 (9.14)	37.40 (6.49)
Math Proficiency ^a	41.92 (12.33)	14.23 (6.84)
Math Advanced ^a	5.52 (4.95)	1.47 (1.76)

^a Significant differences were found.

Graphs 1-6 display changes in mean scores from Pre- to Post-consolidation for each school district. Mean Scores were higher during pre-consolidation for all school districts in the Language Proficiency category with mean differences ranging from 17-32 points (See Graph 1). Language Advanced mean scores for all school districts were higher during pre-consolidation, with North Bolivar, Mound Bayou, and West Bolivar displaying the highest scores (See Graph 2). All districts except Benoit displayed a decrease from pre- to post- for Math Minimum (See Graph 3). Small differences in mean scores emerged in the Math Basic category; with all districts except North Bolivar displaying an increase from pre- to post- test scores (See Graph 4).

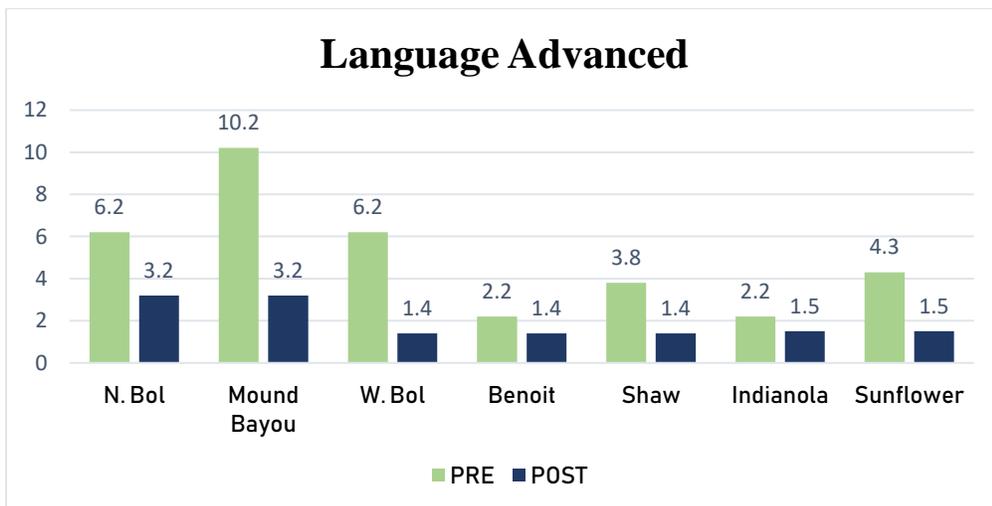
Pre-consolidation scores were significantly higher for Math Proficiency and Math Advanced than Post-scores. In comparing Math Proficiency and Math Advanced, scores in both categories decreased from pre-testing to post-testing. The decline in mean differences ranges from 18-35 points for Math Proficiency, and 2.1 - 7.7 points for Math Advanced (See Graphs 5 and 6).

Graph 1^b

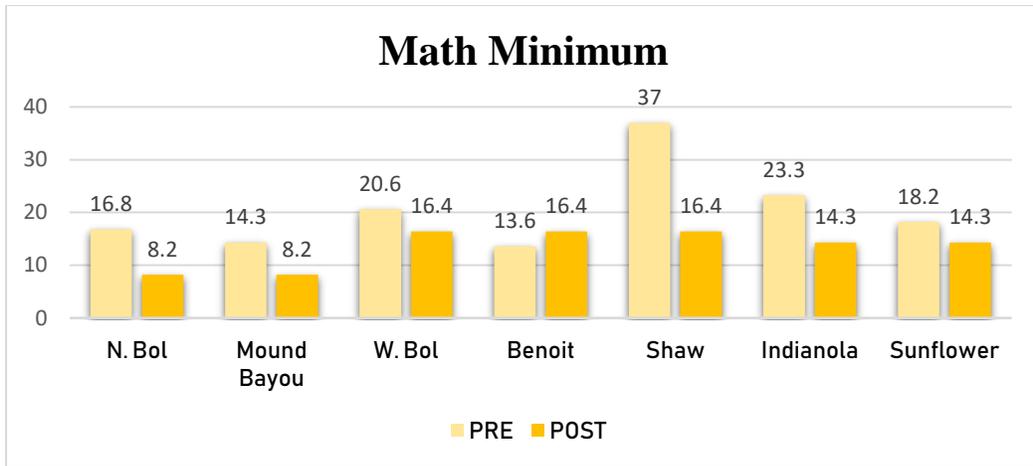


^b*N. Bol*= North Bolivar; *W. Bol*= West Bolivar;
 Post scores for *N. Bol* and *Mound Bayou* are represented by North Bolivar Consolidated District;
 Post scores for *W. Bol*, *Benoit*, and *Shaw* are represented by West Bolivar Consolidated District; and
 Post scores for *Indianola* and *Sunflower* are represented by Sunflower Consolidated District.

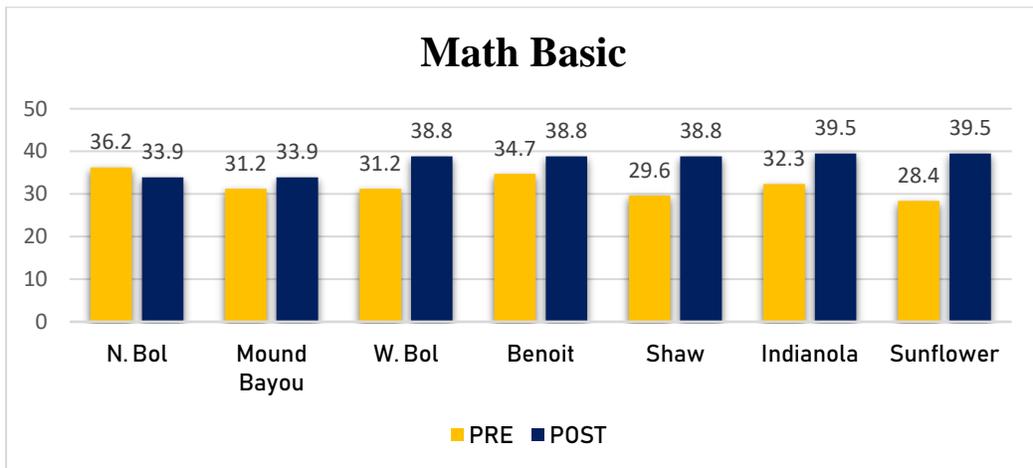
Graph 2^b



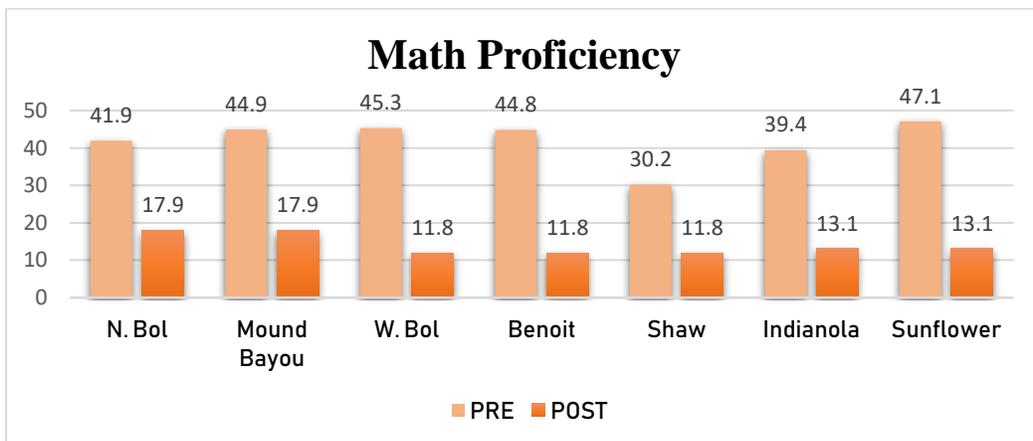
Graph 3^b



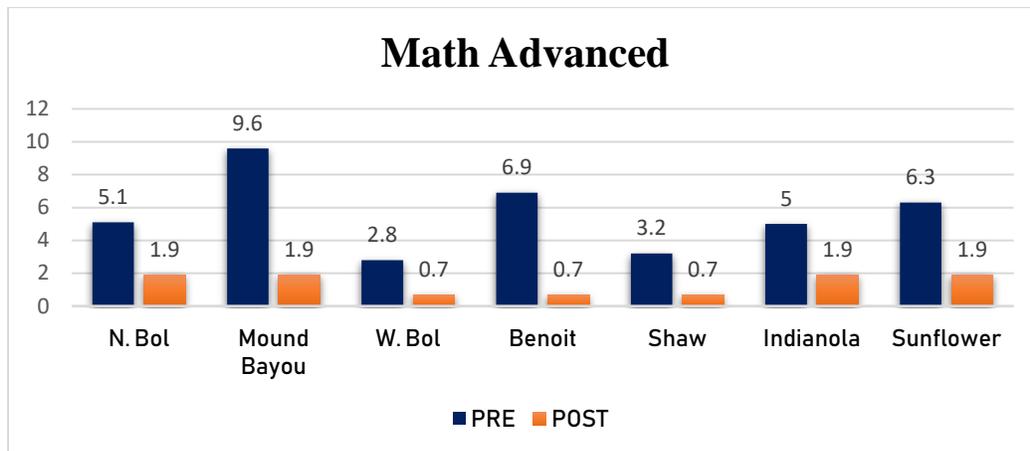
Graph 4^b



Graph 5^b



Graph 6^b



Summary of Findings

Pre-consolidation to post-consolidation test scores decreased in the categories of Language Proficiency, Language Advanced, Math Minimum, Math Proficiency, and Math Advanced. An increase in pre- to post-tests scores occurred only in the Math Basic Category. Therefore overall, it appears school consolidation had a negative impact on student academic achievement based solely on test scores.

Discussion

One reason often cited for school consolidation involves cost savings and/or creating more efficiency within school districts. This line-of-reasoning assumes consolidating school districts will provide cost savings that ultimately result in greater efficiency and academic achievement. This idea is supported by the notion that cutting costs will allow more resources to be allocated into the classroom. In theory, school consolidation appears to be an attractive, viable option for improving academic achievement and the quality of education for students. That is, assuming all students have access to excellent schools, teachers, and community support. This assumption has not always proven to be true in Mississippi. Based upon this study's findings, the academic results (as measured by test scores) of school district consolidation are not encouraging.

The impact of school consolidation on academic achievement in Mississippi is difficult to assess. To be objective, it is important to consider other factors that can potentially impact the findings of this study. Students took the MCT 2 for the pre-consolidation years and the MAAP for the Post-consolidation years. The MAAP test included a College and Career Readiness Component (CCR). The CCR standards are designed "to be robust and relevant to the real world, reflecting the knowledge and skills that students need for success in college and careers and to compete in the global economy" (2015 Mississippi College-and Career-Readiness Standards for English Language Arts, 2015). Another important factor to consider is the transitional issues that may arise from combining school districts such as changes in school/district size, location, teachers, administrators, and other transitional factors. Additionally, this study included four years of data that may not be enough to assess the long-term academic impact of district consolidation.

Although students took the MCT 2 for the Pre-consolidation years and the MAAP for the Post-consolidation years, test score differences exist not only when examining combined scores for all categories; but also when examining test scores within a specific testing category (e.g., Basic, Proficiency, Advanced) (See Graphs 1-6). The scoring differences at both levels tend to offset the “different tests” explanation for differences in test scores.

School district consolidation is not a “one-size-fits-all solution” and needs considering on a case-by-case basis. While consolidation is likely to lower operational costs, those savings tend to diminish if academic achievement significantly declines. Academic achievement should be at the forefront when deciding whether to consolidate a district. When considering district consolidation, other variables besides cost and efficiency deserve attention (e.g., current academic achievement levels, graduation rates). Although rural districts may cost more to operate on a per-pupil basis, this does not mean they are less efficient or impactful than larger districts.

Conclusions

School consolidation theory assumes consolidating small school districts will provide cost savings, greater efficiency, and in turn increase academic achievement. Therefore, school consolidation appears to be an attractive, viable option for improving academic achievement and the quality of education for students assuming all students have access to excellent schools, teachers, and community support. However, when considering school consolidation, other variables besides cost and efficiency need consideration and evaluation (e.g., current academic achievement scores and overall school performance levels).

This research brief investigated the impact of school consolidation on student academic achievement in Mississippi. As documented in this study’s research findings, the districts included in this study tended to score higher on standardized tests before consolidation. In light of this study’s findings, and assuming the primary goal of school consolidation is improving student academic performance, this study recommends policymakers proceed cautiously before mandating future school consolidations. The research evidence suggests school consolidation may not be the best approach to improving academic performance in some small rural school districts.

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