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ABSTRACT

In 1996, the Mississippi State Department of Education published information on accreditation, finances, student achievement, and other variables that could be utilized to assess each school district's success. After the report's publication, questions surfaced regarding disparities in the funding of the public school districts in the state. An analysis of these areas of concern is presented in this paper. Some of the study's key questions include: "What was the extent of available funds and expenditures for public school districts in Mississippi?"; and "What is the relationship between available funds and local and state expenditures for school districts in the state?" Data analysis of state funding revealed that disparities do exist in terms of valuation per pupil. Disparities also exist between the wealthiest and poorest school districts' financial resources, as well as in educational opportunities. It was found that local financial support influences student achievement in a positive manner. Schools with superior accreditation levels tend to spend more money per pupil, and most of the achievement variables were significantly related to local and state per pupil expenditure. Interestingly, those school districts where the citizens of the district taxed themselves at a higher rate tended to be accredited at higher levels and students tended to achieve more. (RJM)

# FUNDING DISPARITIES BETWEEN PUBLIC SCHOOL DISTRICTS IN MISSISSIPPI

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**Paper presented at the annual conference of the Mid-South Educational Research Association**

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# Funding Disparities Between Public School Districts in Mississippi

Lee Napier, Ed.D.

## Abstract

In the spring of 1996 the Mississippi Report Card 95 was published by the Mississippi State Department of Education. This document was a district by district report including information on accreditation, finances, student achievement, and other variables which could be utilized to assess to some extent the success of the school district. Questions have surfaced regarding disparities in the funding of the public school districts in Mississippi and the relationship of these disparities to student achievement as well as the level of accreditation of the districts. This study was designed to explore these areas of concern. The Report Card 95 along with the Annual Report of the State Superintendent of Public Education of Mississippi was utilized to obtain data with respect to per pupil expenditures, accreditation levels, local millage rates, and 23 student achievement indicators.

Data analysis revealed that disparities do exist in terms of valuation per pupil in ADA (VPPADA), local per pupil expenditures (LPPE), state per pupil expenditures (SPPE), combined local and state per pupil expenditures (LSPPE), and local millage rates (Mills). The Wealthiest school districts are recipients of significantly higher LPPE and LSPPE than the poorest districts; urban school districts are significantly higher in LPPE, and Mills than rural districts; while rural districts are significantly higher in SPPE; schools with superior accreditation levels tend to spend more money per pupil; and most of the achievement variables are significantly related to LPPE (20 of 23). Perhaps the most interesting finding of all was that those school districts where the citizens of the district taxed themselves at higher rates (Mills), although the district did not necessarily have the higher VPPADA, tended to be accredited at higher levels and students tended to achieve more.

## INTRODUCTION

The education of the children of Mississippi is an enormous task in terms of time, finances, and planning. A majority of the citizens of Mississippi devote large segments of their lives to the education of the children of the State. All citizens, who can afford to, contribute directly through taxes they pay at the local, state, and federal levels. The citizens of Mississippi are parents of school age children and grandchildren, graduate school personnel, teachers, administrators, and the like. They not only have children and grandchildren in school and friends with children in school, but also manifest an interest in the education of the youth of the State by volunteering, serving in the PTA, and assisting in individual school fund raising efforts. Few residents exist that have no connection whatever with the education of Mississippi children.

According to the 1990 Census, Mississippi has a total population of 2,573,216, of whom 1,210,729 (47.1%) live in urban areas and 1,362,487 (52.9%) live in rural areas (United States Bureau of the Census, 1993). Urban areas are considered those places in excess of 2,500 while those places of population less than 2,500 are considered rural (United States Bureau of the Census, 1993). From this population, according to the Annual Report of the State Superintendent of Education (1996), in the school year of 1994-95, 558,182 students were enrolled in the public schools of Mississippi with an average daily attendance of 470,974. These students were enrolled in 153 school districts; 68 county; 81 separate and four agricultural high schools. These districts combined included 1,013 public schools, these schools producing 23,773 Diploma Graduates, 1,629 Certificate Recipients, and 855 GED Credential Recipients, (Annual Report, 1996).

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The public school personnel at the district level charged with the responsibility to run the educational programs comprised a total staff of 60,021.25. Administrators, teachers, and other certified personnel, as required by the State Department, made up 33,240.62 (53.4%) of this total while the remainder, 26,781.03 (44.6%), were composed of non-certified personnel (Annual Report, 1996).

The funds necessary to support the public school of Mississippi are derived from three sources: state, local and federal. In 1994-1995, 42.33% of the total appropriation for the State of Mississippi was allocated for public education. The source, amount, and percent of funds as reported in the Annual Report of the State Superintendent of Public Education (1996) indicated that local resources amounted to $621,296,565.86 (29.35%) and state resources equaled $1,185,181,111.12 (55.99%), while federal support amounted to $309,946,241.96 (14.64%).This totaled $2,116,423,918.94 in revenue for public education in Mississippi for the school year 1994-1995. These revenues and subsequent expenditures for public school education resulted in a total per pupil expenditure of $4,211 for the school year 1994-95. According to the National Education Association of the United States, (1995) the estimated per pupil expenditure in the United States for that same year was $5,074.

The task of justifying the financial support of the educational system of Mississippi has been the responsibility of the State Board of Education, since enactment of the Accreditation Law of 1970 (Accreditation Requirements of the State Board of Education, 1995). This law "gave the State Board of Education the power and authority to prescribe the standards and procedures for the accreditation of schools and placed the responsibility for enforcement in the State Department" (Accreditations Requirements, p. 2). The accreditation system emphasized quantitative factors such as specific resources and personnel. With the dawn of the age of accountability a need arose for more evidence of public school performance based on criteria other than school appropriations in dollars and personnel available for staffing schools. The demand for accountability focused on student performance, that is, the quality of the product in the form of test scores. The Education Reform Act of 1982 spoke to these cries for accountability in the form of output criteria. This act "established a task force to develop a system for assuring the quality of school programs in Mississippi" (Accreditation Requirements, p. 2). The new system was to emphasize performance based school accreditation and "focus on the extent to which schools help students master defined content and objectives" (Accreditation Requirements, p. 2). Subsequent legislation enacted in 1994, "Maintained the emphasis on student achievement and mandated that the Mississippi State Board of Education examine the performance based accreditation system in order to strengthen and expand it" (Accreditation Requirements, p. 2).

The accreditation system in place today is a direct result of these actions and presently the state of Mississippi has a very comprehensive accreditation system in operation which focuses to a great extent on the test performance of the children served by the public schools.

In 1994-95 schools were accreditated at one of five levels. The level of accreditation was based on performance standards and process standards. Performance standards in terms of output or product "address the components of the testing program and other outcome measures related to the performance of a school district" (Accreditation Requirements, p. 11). Process or input standards "address accepted, educational principles and practices that are believed to promote educational quality" (Accreditation Requirements, p. 11).

These five levels of accreditation are: 5-Excellent, 4-Advanced, 3-Successful, 2-Warned, and 1-Probation. A Level 2 district that remains at this evaluation for two consecutive years may be downgraded to level 1 (Accreditation Requirements, p. 12).

Each school district is evaluated by assignment of a Performance Index as a means of assessing placement within each Accreditation Level (Accreditation Requirements). The performance index reflects only the percentage of performance standards met by a district; it does not reflect compliance with the process standards. The performance index is used to report a district's performance rating within its current accreditation level, as well as a district's improvement toward a higher performance rating.

The performance standards that are required for the various levels of accreditation are based on specific tests. These tests are given annually and once the results are available they are combined with the process standards and each school district is assigned an accreditation level and performance index in March of each year based on the previous year's verifiable data.

The tests that are used as performance standards are the Iowa Test of Basic Skills (ITBS) in language, mathematics, and reading for grades 4 through 8; Tests of Achievement and Proficiency (TAP) in reading, mathematics and language arts at the ninth grade level; Performance Assessments (PA) in integrated language arts and mathematics in grades 4 through 9; and Functional Literacy Examinations (FLE) in reading, mathematics, and written communications. Additionally, the State Algebra 1 subject area test and the ACT composite scores are used as performance standards. Percentage of graduates, amount of ACT Core course work, and the percent of students scoring less than the first quartile in all tests except the performance assessment tests are also used as performance standards. Minimum scores for all test variables are set each year by the Mississippi State Department of Education.

The test data scores are expressed as normal curve equivalent scores (NCE) for the Iowa Test of Basic Skills (ITBS) and the Tests of Achievement and Proficiency (TAP). The ITBS/TAP scores for Integrated Language Arts and Mathematics Performance Assessments (PA) are reported as National Percentile Ranks (NPR) of estimated ranges. These PA categories and ranges are below average (1-25), low average (26-49), high average (50-74) and above average (74-99). The information given above was extracted from the Accreditation Standards of the State Board of Education, (1995).

Data reflecting all performance standard results by school district for the 1994-1995 school year are reported in the Mississippi Report Card 1995 (1996). This document, produced and distributed through the Mississippi State Department of Education, is provided as an evaluation tool for Mississippi's 149 school districts and four agricultural high schools. "Furthermore The Report Card is furnished to increase the understanding of the opportunities available to districts and to encourage positive local support for education in Mississippi" (Report Card, p. iii).

The expenditures of school districts of Mississippi represent a large part of the total general fund appropriation each year. The state contributed 42.33% of the total general funds appropriated in 1994-95 to provide funds for public school education. Local, state, and federal funds provided a total per pupil expenditure of $4,211 for children attending the public schools of Mississippi. This level, however, is well below the national average per pupil expenditures of $5,074 and next to last in the Southwest (National Education Association, 1995). This per pupil expenditure, when compared to the national average (83.3 %) and position in the Southeast would, to many, suggest

that the solution to improving school performance is putting more money into education. Others question such solutions. The only question may be: Are schools with more money doing a better job in terms of student performance?

## PURPOSE OF THE STUDY

This research was undertaken to seek answers to questions with respect to the availability of funds (local assessment) and expenditures for the public school districts in Mississippi for the 1994-1995 school year. To this end the following research questions were formulated:

1. What was the extent of available funds and expenditures for public school districts in Mississippi?

2. What is the relationship between available funds and local and state expenditures for school districts in Mississippi?

3. Are school children in the wealthiest public school districts in Mississippi allocated more local and state expenditures than are children in the poorest school districts?

4. Does the quality of educational opportunities for children in Mississippi, based on availability of funding and expenditures, depend on where a child resides and attends school?

5. How does student achievement relate to the availability of funds and state and local expenditures for public school districts in Mississippi?

6. How do school districts at different levels of accreditation differ with respect to availability of funds and state and local expenditures for public school districts in Mississippi?

## METHODOLOGY

### Research Design

This research is descriptive in nature and designed to investigate and examine the availability and expenditures of funds at the local and state levels for the public schools of Mississippi. These resources were examined to assess funding disparities, if they exist, with respect to wealth of the school districts in terms of the assessed valuation of the school district reflected by the valuation per pupil in average daily attendance (VPPADA). In order to determine if the wealth of a school district relates to the funding of the public schools in Mississippi, it is necessary to find a variable that reflects such wealth. For this study VPPADA will be utilized since it is determined by the total assessed valuation of the district less the specific Homestead Exemption of those over 65 years of age or disabled, divided by the average daily attendance in each district (Accreditation Manual, 1966). Since the school derives the majority of local funds through ad valorem taxes determined by

the local school board and the Board of Supervisors through the establishment of millage rates (Mississippi Code, 1995 and 1996) this variable is a reasonable indicator of the wealth of a school district. Disparities between local per pupil expenditures (LPPE) and state per pupil expenditures (SPPE) as well as local millage rates will also be examined.

Differences in expenditures of the wealthiest and poorest school districts, determined in terms of VPPADA, were determined. Rural and urban school districts were compared on VPPADA, combined local and state per pupil expenditures (LSPPE), LPPE, SPPE, and local millage rate (Mills). Schools at different levels of accreditation were also compared on VPPADA, LSPPE, LPPE, SPPE, and Mills. The relationship between measures of student achievement, determined through the Mississippi statewide testing program, and VPPADA, LSPPE, LPPE, SPPE, and Mills were also explored.

This investigation is restricted to the 149 Mississippi school districts listed in the Mississippi Report Card 1995. The four agricultural high schools listed in the report were not included in this study.

## Data

The data for this study is secondary in nature and was derived from two sources, the Mississippi Report Card 1995 and the Annual Report of the State Superintendent of Public Education. The data extracted and utilized from the Mississippi Report Card 1995 included levels of accreditation, total per pupil expenditures, valuation per pupil in ADA (VPPADA), district average scores for ITBS for grades 4- 8, TAP for grade 9, Functional Literacy Examination (FLE) in reading, mathematics and communication, ACT Composite Score, and the state Algebra 1 score. The data taken for analysis from the Annual Report of the State Superintendent of Public Education consisted of the percent of school budget from three sources-- local, state, and federal-- and the local millage rate. The percent of support from local and state funding was needed to compute LPPE, and SPPE. The local millage rate (Mills) was collected to be utilized as an additional variable which indicates local financial support for the schools.

The data derived from the state-wide testing program is of three types. The data derived from the ITBS for grades 4-8 and the TAP for grade 9 in reading, mathematics and language are norm referenced tests reported as district averages in normal curve equivalents (NCE) and thus are interval in nature (Mississippi Assessment, 1994-95). The ACT Composite will be treated as interval data also. The FLE scores (District and School Test Manual, 1996) and the Algebra 1 scores (Mississippi Subject Area Testing Program, 1995) are scaled scores and are treated as ordinal data. District data related to funding are expressed as dollar amounts or percentages and are utilized as interval data.

## Statistical Analysis

Descriptive, correlational and comparative statistical analyses were conducted in this study. Most variables are described in terms of means, standard deviations and in some cases minimum and maximum values and ranges. Correlations were computed to describe the relationships between the achievement variables and financial resources variables. Those correlation coefficients between Algebra 1 and FLE scores and the funding variables are ordinal in nature (Spearman Rho). All

others were determined by a parametric routine (Pearson Product Moment). Nonparametric comparison techniques were utilized since groups were not selected at random and the homogeneity of variance and normality of observations across groups was questionable. The Wilcoxon-Mann-Whitney Test (Siegel and Castellan, 1988) was conducted to compare the top twenty and bottom twenty schools, in terms of VPPADA, LSPPE, LPPE, SPPE, and Mills. Rural and urban school districts were compared in a similar fashion on the same variables. The Kruskall-Wallis one-way analysis of variance by ranks was utilized to compare school districts grouped according to accreditation level on VPPADA, LSPPE, LPPE, SPPE and Mills. When significant differences were found, multiple group comparisons were conducted as suggested by Siegel and Castellan (1988) were utilized. An alpha level of .05 was set as the criteria for significance.

## PRESENTATION AND ANALYSIS OF DATA

Data will be presented and analyzed in this section in a manner which will assist in answering the specific questions posed in the purpose of the study.

### Available Funds and Expenditures

Results of data analysis presented in Table 1 represents the means, standard deviations, minimum, maximum, and ranges of VPPADA, LSPPE, LPPE, SPPE and Mills. Differences that exist between the wealthiest and poorest school districts, in terms of LPPADA, range from a minimum of $5,137 to a maximum of $48,728, with a mean of $19,009.89, which reflects a range of $43,591. Ranges in funding for LSPPE ($1,718.80), LPPE ($1,936.53), and SPPE ($2,074.34) reflect disparities in financial support from the two sources which account for the major proportion of expenditures (85.4%) of the school districts of Mississippi. The range in Mills, reflecting local tax rates, is 67.78. These tax rates, when applied to local assessed valuation, result in a major proportion of local school funds.

Table 1
Descriptive Data for VPPADA, LSPPE, LPPE, SPPE, and Mills for Mississippi School Districts 1994-1995 (N=149)

| Source | M | SD | Minimum | Maximum | Range |
|---|---|---|---|---|---|
| VPPADA | 19009.89 | 7476.79 | 5137.00 | 48728.00 | 43591.00 |
| LPPE | 1068.26 | 380.53 | 293.84 | 2229.57 | 1936.53 |
| SPPE | 2474.29 | 272.80 | 1668.86 | 3743.20 | 2074.34 |
| LSPPE | 3542.55 | 361.41 | 2775.15 | 4493.95 | 1718.80 |
| Mills | 43.71 | 11.30 | 15.75 | 83.53 | 67.78 |

Division of these ranges into specific intervals presents a clearer picture of the dispersion of these variables. Although the bulk of school districts cluster in intervals close to the mean, several schools are members of the extreme ranges, both low and high, for all variables. For example the frequency with the lowest interval for VPPADA (< $14,999) is 49, which accounts for 32.9% of the school districts (Table 2) while the highest interval for VPPADA (≥ $30,000) has a

frequency of 14, which is 9.4% of the school districts. Thus a difference of at least $15,000 separates the highest, 9.4%, and the lowest, 32.9%, of the school districts in terms of VPPADA. Similar results were obtained when LPPE was investigated. Seventy-nine school districts(53.0%) received less than $1,000 in LPPE while 21 school districts (14.1%) received in excess of $1,500. Similar information for LSPPE, SPPE, and Mills is also presented in Table 2.

Table 2
Inter-range dispersion of VPPADA, LSPPE, LPPE, SPPE and Mills

| Source | Range Interval | Frequency | % |
|---|---|---|---|
| VPPADA | < 14999 | 49 | 32.9 |
| | 15000-29999 | 86 | 57.7 |
| | ≥ 30000 | 14 | 9.4 |
| LSPPE | 2500-2499 | 35 | 23.5 |
| | 3000-3499 | 73 | 49.0 |
| | 3500-3999 | 34 | 22.8 |
| | 4000-4499 | 7 | 4.7 |
| LPPE | <999 | 79 | 53.0 |
| | 1000-1499 | 49 | 32.9 |
| | 1500-1999 | 17 | 11.4 |
| | 2000-2499 | 4 | 2.7 |
| SPPE | 1500-2499 | 83 | 55.7 |
| | 2500-3499 | 63 | 42.3 |
| | 3500-4999 | 3 | 2.0 |
| Mills | 15.00-29.99 | 10 | 6.7 |
| | 30.00-44.99 | 74 | 49.7 |
| | 45.00-59.99 | 50 | 33.6 |
| | 60.00-84.99 | 15 | 10.1 |

Note; N=149 for each category

The dispersion of varying local tax rates (Mills) is of particular interest since school districts use these taxes to obtain local funds to support schools. Ten (6.7%) of the school districts were collecting taxes through a levy of less than 30 Mills. Fifteen of the school districts were levying taxes in excess of 60 Mills.

To investigate the impact Mills have on the local budget and to determine the relationship between the other variables investigated in this study, correlations were computed between VPPADA, LSPPE, LPPE, SPPE, and Mills. (Table 3) This analysis revealed that VPPADA is significantly related to LSPPE ($r=.5266$, $p<.001$), LPPE ($r=.7921$, $p<.001$) and SPPE ($r=-.4073$, $p<.001$). This analysis also revealed a significant inverse relationship between LPPE and SPPE ($r=-.4268$, $p<.001$). VPPADA is not significantly related to Mills ($r=-.0198$, $p>.05$). However, Mills are related significantly to LPPE ($r=.4219$, $p<.001$) and SPPE ($r=-.2877$, $p<.001$).

Table 3

Inter correlations Between VPPADA, LSPPE, LPPE, SPPE and Mills for Mississippi School Districts, 1994-1995 (N=149)

| VARIABLES | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. VPPADA | ------ | .5266 | .7921 | -.4073 | -.0198* |
| 2. LSPPE | | ------ | ..7308 | .3055 | .2271 |
| 3. LPPE | | | ------ | -.4268 | .4219 |
| 4. SPPE | | | | ------ | -.2877 |
| 5. Mills | | | | | ------ |

Note: * p> .05, p<.001 for all other coefficients.

These results indicate that VPPADA may not indicate local support for schools, but those school districts that do support their schools in terms of LPPE, do so by imposing higher millage rates on their districts. The significant correlation (r=.7921, p<.001) between VAPADA and LPPE and the range of local support through LPPE from a minimum of $293.84 to a maximum of $2,229.57 would indicate the wealthier districts are contributing more funds to the school system than the poorer districts.

**Wealthiest -VS- Poorest School Districts**

To compare the poorest and wealthiest school districts on funding availability, tax rates and expenditures, VPPADA was ranked and the poorest twenty and wealthiest twenty school districts were identified and compared on LPPE, SPPE, LSPPE, and millage rates. Comparisons revealed that the top twenty ranked schools LPPE ($1,681.70) was significantly higher (p=.000) than the lowest twenty ranked schools ($706.88). The state provided significantly (p=.000) more money per pupil to the lowest ranked schools; however, this did not offset the huge difference in LPPE between the two groups in per pupil expenditures. The LSPPE significantly (p=.000) favored the top twenty wealthiest schools by a mean difference in LSPPE of $530.80 per student. No significant difference existed in Mills between the two groups (p=.871) (Table 4). These analyses reveal that significant disparities do exist in public school expenditures between the wealthiest and poorest schools.

Table 4

Comparisons Between Top 20 Ranked and Bottom 20 Ranked Mississippi School Districts as Determined by VPPADA on LPPE, SPPE, LSPPE, and Mills, 1994-1995

| Source | Group | M | M Rank | W | z | p |
|---|---|---|---|---|---|---|
| LPPE | Low 20 | 706.88 | 10.50 | | | |
| | Top 20 | 1681.70 | 30.50 | 210 | 5.41 | .000 |
| SPPE | Low 20 | 2718.64 | 29.45 | | | |
| | Top 20 | 2274.62 | 11.55 | 589 | 4.84 | .000 |
| LSPPE | Low 20 | 3425.53 | 13.20 | | | |
| | Top 20 | 3956.33 | 27.80 | 264 | 3.95 | .000 |
| Mills | Low 20 | 44.06 | 20.20 | | | |
| | Top 20 | 43.73 | 20.80 | 404 | 0.16 | .871 |

**Rural -VS- Urban School Districts**

The environment in which one lives is a circumstance of choice for most adults. This, however, is not the case for most children and the quality of their education, as it relates to the availability of funds, which is out of their hands. The majority of the population (52.9%) live in areas classified as rural by the US Census of 1990. One of the differences in the living environment of the citizens of Mississippi is the distinction of whether they live in a rural or urban area. Therefore the question of whether or not educational opportunities are determined by environment is of interest. To investigate the impact that environment may have on the educational opportunities, in terms of school finances, school districts were grouped on the basis of their being rural or urban. Schools within cities with populations in excess of 10,000 were classified as urban. Rural school districts are those in counties which are one hundred percent rural as defined by the U. S. Census, 1990. These districts were then compared on VPPADA, LSPPE, LPPE, SPPE, and Mills.

Data analyses (Table 5) revealed that urban school and rural school districts did not differ significantly in VPPADA ($p=.064$). However, a mean difference of $4,025.26 was found between the districts in favor of the urban districts. The LPPE expenditure was significantly higher for the urban group ($p=.000$) with a mean difference of $404.05. The SPPE was significantly higher for rural school districts ($p=.000$). Yet the contributions by the state did not completely make up for the difference in local funds since the rural areas were still $133.32 lower than the urban areas. This can be partially accounted for by the fact that urban schools levy taxes (Mills) at a significantly higher rate ($p=.000$) than do the rural school districts. These results indicate that students from urban areas attend schools which receive considerably more funding per pupil especially from local revenue sources.

Table 5

Comparisons Between Mississippi Rural And Urban School Districts on VPPADA, LSPPE, LPPE, SPPE, and Mills in 1994-1995

| Source | Schools | n | M | M Rank | w | z | p |
|---|---|---|---|---|---|---|---|
| VPPADA | Rural | 25 | 18374.20 | 22.84 | 571 | 1.85 | .064 |
| | Urban | 28 | 22399.46 | 30.71 | | | |
| LSPPE | Rural | 25 | 3573.81 | 23.84 | 596 | 1.41 | .159 |
| | Urban | 28 | 3707.13 | 29.82 | | | |
| LPPE | Rural | 25 | 967.30 | 20.00 | 500 | 3.12 | .002 |
| | Urban | 28 | 1371.35 | 33.25 | | | |
| SPPE | Rural | 25 | 2606.51 | 35.80 | 895 | 3.92 | .000 |
| | Urban | 28 | 2335.77 | 19.14 | | | |
| Mills | Rural | 25 | 34.86 | 15.04 | 376 | 5.33 | .000 |
| | Urban | 28 | 54.35 | 37.68 | | | |

Note: The Rural school districts are 100% rural (Pop. < 2500) as defined by the 1990 Census. The Urban school districts are those within Municipalities of 10,000 population or greater as identified by the 1990 Census.

**Achievement**

To address the impact that financial resources may have on student achievement, correlation coefficients were determined between VPPADA, LSPPE, LPPE, SPPE, Mills, and the 23 test achievement variables utilized in determining the accreditation level of each school district. The scores to be utilized in this analysis represent the ITBS scores for grades 4 through 8 and the ninth grade TAP in language, reading, and mathematics, FLE scores in mathematics, reading, and written communications, the State algebra 1 score, and the ACT Composite score.

Data analysis revealed that when the 23 student achievement variables were correlated with VPPADA, LSPPE, LPPE, SPPE, and Mills, 4 were correlated significantly with VPPADA, 9 with LSPPE, 20 with LPPE, 12 with SPPE, all of which were negative, and 22 with Mills (Table 6). Although few achievement variables (4) were significantly related to VPPADA, the overwhelming number which were significantly related to LPPE support the position that student achievement is related to a school district's financial standing.

Table 6

Correlation Between VPPADA, LPPE, SPPE, LSPPE, Mills, and Measures of Achievement Reported in the Mississippi Report Card, 1995 (N=149)

| Achievement | VPPADA | LPPE | SPPE | LSPPE | Mills |
|---|---|---|---|---|---|
| ITBS Grade 4 Language Arts | -.0093 | .1108 | .0137 | .1270 | .2265** |
| ITBS Grade 4 Mathematics | .1285 | .2236** | -.0849 | .1415* | .2364** |
| ITBS Grade 4 Reading | .0969 | .2605** | -.1375 | .1705* | .2459** |
| ITBS Grade 5 Language Arts | .0617 | .2132** | -.0635 | .1766* | .2756** |
| ITBS Grade 5 Mathematics | .1827* | .3133** | -.0903 | .2617** | .2682** |
| ITBS Grade 5 Reading | .1012 | .2762** | -.1361 | .1881* | .3087** |
| ITBS Grade 6 Language Arts | .0416 | .1955* | -.1077 | .1246 | .2853** |
| ITBS Grade 6 Mathematics | .1198 | .2779** | -.1332 | .1921* | .3224** |
| ITBS Grade 6 Reading | .1179 | .2785** | -.1916* | .1486 | .2708** |
| ITBS Grade 7 Language Arts | .0942 | .2401** | -.2216** | .0855 | .2572** |
| ITBS Grade 7 Mathematics | .1348 | .2651** | -.1588 | .1593 | .2132** |

Cont'd next page

Table 6, cont'd

| Achievement | VPPADA | LPPE | SPPE | LSPPE | Mills |
|---|---|---|---|---|---|
| ITBS Grade 7 Reading | .1354 | .2837** | -.2056* | .1435 | .2516** |
| ITBS Grade 8 Language Arts | .0609 | .1794 | -.1519* | .0742 | .2082** |
| ITBS Grade 8 Mathematics | .1217 | .2561** | -.1759* | .1390 | .2244** |
| ITBS Grade 8 Reading | .0999 | .2579** | -.1910* | .1273 | .2564** |
| TAP Grade 9 Language | .0433 | .2140** | -.1986* | .0754 | .3202** |
| TAP Grade 9 Mathematics | .1757* | .2979** | -.1885* | .1714* | .2332** |
| TAP Grade 9 Reading | .1437 | .3049** | -.2138** | .1596 | .2936** |
| Algebra I (State) | .1213 | .2151** | -.1679* | .0998 | .2671** |
| FLE Mathematics | .0539 | .0622 | -.0129 | .0604 | .1122 |
| FLE Reading | .1419 | .2657** | -.1357 | .1787* | .2290** |
| FLE Writing | .1137 | .1953* | -.1888* | .0638 | .2336** |
| ACT Core Composite | .1814* | .3210** | -.2015* | .1874* | .2942** |

Note: * p< .05, ** p< .01

**School Accreditation**

The Mississippi State Department of Education has the responsibility to accredit each school district each year. The department, after assessing performance and process standards, assigns each school an accreditation level. They are assigned either a level of: 5-Excellent, 4-Advanced, 3-Successful, 2-Warned, or 1-Probation. Since the availability of funds is significantly related to test performance (Table 6) and since accreditation is based on test results, then it would be expected that accreditation levels would differ according to funds available for each school district. To determine if this was indeed the case, comparisons were made between school district accreditation levels on VPPADA, LSPPE, LPPE, SPPE, and Mills.

A one way analysis of variance by ranks (Kruskall-Wallis) routine was conducted to determine if significant differences existed between accreditation levels 1 through 4 for VPPADA, LSPPE, LPPE, SPPE, and Mills. Since only one Level 5 school was reported by the Mississippi

Report Card 1995, only four levels were compared. Nineteen schools were accredited at level 1 (Probation), 22 at level 2 (Warned), 87 at level 3 (Successful), and 20 at level 4 (Advanced). The results of these analyses (Table 7) revealed that significant differences existed in LPPE ($p=.000$). Both level 3 and 4 were revealed to have spent more money per pupil than levels 1 and 2 ($p.<.05$) while level 4 did not differ significantly from level 3 ($p>.05$) nor did level 1 and 2 differ significantly ($p>.05$). The differences in SPPE were not significant ($p=.097$). LSPPE did not differ significantly between accreditation levels ($p=.081$). However dollar amount differences did occur at each accreditation level in favor of the level 3 and 4 accredted schools.

Table 7

Comparisons Between Accreditation Levels on LPPE, SPPE, LSPPE, VPPADA, and Mills for Mississippi School Districts, 1994-1995 (N=148)

| Source | Level | n | M | M Rank | $X^2$ | p |
|---|---|---|---|---|---|---|
| LPPE | 1 | 19 | 846.21 | 45.47 | | |
| | 2 | 22 | 855.18 | 52.23 | | |
| | 3 | 87 | 1137.53 | 81.97 | 21.470 | .000 |
| | 4 | 20 | 1217.14 | 94.10 | | |
| SPPE | 1 | 19 | 2621.10 | 90.79 | | |
| | 2 | 22 | 2526.58 | 85.73 | | |
| | 3 | 87 | 2452.61 | 70.71 | 6.334 | .097 |
| | 4 | 20 | 2381.54 | 63.15 | | |
| LSPPE | 1 | 19 | 3467.31 | 62.11 | | |
| | 2 | 22 | 3381.87 | 58.00 | | |
| | 3 | 87 | 3590.14 | 79.66 | 6.718 | .081 |
| | 4 | 20 | 3598.68 | 82.00 | | |
| VPPADA | 1 | 19 | 16735.00 | 56.32 | | |
| | 2 | 22 | 16527.14 | 62.95 | | |
| | 3 | 87 | 19661.44 | 77.80 | 8.180 | .042 |
| | 4 | 20 | 21057.40 | 90.10 | | |
| Mills | 1 | 19 | 37.17 | 49.92 | | |
| | 2 | 22 | 40.18 | 62.23 | | |
| | 3 | 87 | 45.11 | 80.45 | 11.035 | .012 |
| | 4 | 20 | 47.79 | 85.47 | | |

Note: Only one school was listed at level 5 according to the Mississippi Report Card 1995 and was not included in this analysis.

Although significant differences in VPPADA, the variable being used in this study as an indicator of the wealth of a school system, was indicated between the accreditation levels ($p=.042$). However multiple comparisons indicated no significance differences when the individual groups

were compared. Significant differences ($p=.012$) were found in Mills between school districts with different accreditation levels. Level 3 has a significantly higher millage rate than level 1 ($p<.05$), while levels 2, 3, and 4 do not differ significantly ($p>.05$).

## CONCLUSIONS

The evidence is clear that Mississippi spends a large proportion of its available financial resources in support of public education. In 1994-1995, 42.33% of the general funds appropriated by the Mississippi legislature went to the support of public education. In this school year the combined per pupil expenditures from the state and the local school district amounted to a per pupil expenditure of $3,542.55. However the range in per pupil expenditures is such that it would suggest that disparities do exist in the financial support of public school districts in Mississippi. The extent of these disparities statewide, how they impact on specific subgroups (wealthiest and poorest districts/rural and urban districts), student achievement and school accreditation was the purpose of this study.

The data analysis results would reasonably support the following conclusions. These conclusions are based on district wide data. All achievement data was in the form of district wide averages. These results cannot be generalized to a specific school within a school district.

1. Disparities do exist in terms of per pupil valuation of the districts', per pupil expenditures, and local tax rates.

2. Disparities exist between the wealthiest and poorest school districts financial resources. Wealthier school districts average per pupil expenditures from local resources are significantly higher than poorer districts. The state contributes significantly more funds to the poorer districts. However total per pupil expenditures from local and state funds are significantly higher for the wealthier districts.

3. Disparities exist in educational opportunities, in terms of financial resources, for children with respect to where they live and go to school. Urban school districts are significantly higher in local per pupil expenditures. State per pupil expenditures for rural school districts are significantly higher than those of urban districts. These higher resources from the state serve to equalize the total combined state and local per pupil expenditures, in terms of significance; however, in total dollar amounts the urban schools still tend to spend more per pupil than rural schools. Urban school districts were supported by significantly higher millage rates than the rural schools.

4. Local financial support impacts positively on student achievement. Twenty of the 23 achievement variables were significantly correlated with local per pupil expenditures. Valuation per pupil was only significantly related to four of the achievement variables while state per pupil expenditures were only related significantly to 12 of the achievement variables and these were inverse relationships. When state and local resources were combined the totals were only significantly related to 9 of the 23 variables. Perhaps the most revealing result in this area is that

the local millage rate is significantly related to 22 of the 23 achievement variables. This along with little evidence in support of valuation per pupil being related to achievement, only four of 23 variables, would suggest that the wealth of the district is not as important as the willingness of the citizens to support their schools through higher taxes.

5. Local financial resources impact positively on school accreditation. Local per pupil expenditures were significantly higher for schools accreditated at level 4 (Advanced) and 3 (Excellent) than schools accreditated at levels 2 (Warned) and 1 (Probation). No significant differences existed between accreditation levels in state per pupil expenditures and combined state and local per pupil expenditures. Although no significant differences were found in valuation per pupil in ADA between the different accreditation levels, significant differences were when they were compared on local millage rates. Levels 3 accreditated schools were significantly higher on local millage rates than level 1.

These analyses support that disparities do exist between school districts in Mississippi and that financial resources impact positively on outcomes in terms of achievement and school accreditation. These analyses also suggest very strongly that although the wealth of a district is very important in terms of having a tax base that can support the local district; it takes a citizenry that is supportive of the schools to set a tax rate which is high enough to provide the needed local support. This was shown when urban school districts were compared to rural, when achievement variables were correlated with the resource variables, and when accreditation levels were compared.

## RECOMMENDATIONS

This study is descriptive in nature and thus any findings are relative to what the situation was at the time the data was collected. These recommendations are made with that in mind:

1. An investigation of local citizens attitudes toward the school system, in particular, and education, in general, should be investigated.

2. An assessment of the relationship of the attitudes of the citizens toward financial support of the school district and those attitudes recommended in 1.

3. Analysis of the difference between the wealthiest and poorest school districts; urban and rural school districts; and schools of different accreditation levels in terms of those school characteristics which may differ as a result of variations in school finances. These types of investigations may reveal how extra financial resources may be utilized to achieve the educational goals that have and will be set for all of the school districts in Mississippi.

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