MURC Research Brief

Comparison of Factors Influencing High- and Low-rated Elementary Schools in the Jackson Public Schools' District

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Abstract

This research study compared academic and socio-economic indicators shared by a group of high and low performing elementary schools in the Jackson Public School District (JPS). The goal was to identify potential factors contributing to differences in academic performance within JPS elementary schools. This study utilized a non-experimental comparative research design using mean scores and socio-economic indicators to analyze research data. The Mississippi Department of Education provided secondary data on 16 elementary schools in JPS for the 2017-2018 school year. The sixteen elementary schools selected represented eight high rated "A" and "B" schools and eight low rated "F" schools. The specific schools included in the comparison were Barr, Baker, Isable, Spann, Casey, Smith, Wilkins, Johnson, Watkins, Key, Raines, Oak Forest, Sykes, Lake, Pecan Park, and McLeod. The student population for this study is approximately 5,972 students across the 16 schools. Scores from the Mississippi Academic Assessment Program (MAAP) for the 2017-2018 school year served to measure student achievement. Data revealed differences among the comparison schools. F-rated schools had higher rates of in-school suspension; higher percentage of experienced teachers; lower percentage of in-field teachers; higher percentage of students scoring in Academic Assessment levels 1-3 (Minimal, Basic, and Pass), and a lower percentage of students scoring in higher Academic Assessment levels 4 (Proficiency) and 5 (Advanced) on testing. In addition to the differences previously cited, A-rated schools had a higher per pupil expenditure average, and higher median household incomes than F-rated schools. While this study identified some factors contributing to differences between high- and low-rated elementary schools, definitive conclusions are not available without additional research.

Introduction

There has been some research documenting a link between a student's academic achievement and their level of poverty (Hegedus, 2018) (Huettl, 2016). Low academic achievement correlated with a lack of resources, low socioeconomic status, and teacher quality (Lacour & Tissington, 2011). However, despite those barriers, there are instances where schools with students from predominantly low socio-economic backgrounds defy the odds and exhibit high academic performance.

This research compares several socio-economic indicators shared by a group of high performing (A/B-rated) elementary schools and low performing (F-rated) elementary schools in the Jackson (MS) Public School District. Results from this study can assist Jackson Public Schools, and other similar school districts, with identifying potential factors and developing interventions that can help improve academic performance.

Overview of the Jackson Public School District (JPS)

The Jackson Public School District (JPS) is the second largest school district in Mississippi and serves approximately 24,000 students (Jackson Public Schools, 2019). Located in the State's capital and its largest city, JPS is representative of many urban school districts across several socio-economic indicators. The district is comprised of 7 high schools, 12 middle schools, 33 elementary schools, 5 special program schools, and has a student population that is 95.28% predominantly black (Jackson Public Schools, 2019) (Mississippi Department of Education, 2019).

Although JPS was rated a failing ("F") district for 2 consecutive years (2017-2018 and 2018-2019), within JPS are schools classified as high achieving based upon state accountability ratings. Several JPS elementary schools received high state accountability ratings over consecutive years. Those schools included Barr elementary from 2008-2015; McWillie from 2008-2014; and George from 2008-2014 (Mississippi Department of Education, 2019). It should be noted that George elementary was closed in 2015, and Barr elementary school has been recommended for closure due to low student enrollment and significant infrastructure problems (Dreher, 2018) (Ramseth & Bologna, 2019). For the previously mentioned schools, the median household income levels range from $17,500 to $31,935.

Baker Elementary is another school which has received consistently high accountability ratings from 2008-2018 (Mississippi Department of Education, 2019). The reported median household income for the Baker Elementary community is $23,410, which is nearly half the amount of Mississippi's median income (Census.gov, 2019). This research brief seeks to identify socio-economic factors that can help school officials develop interventions designed to improve academic achievement. The following sections discuss research findings and the implications of those findings.

Methods

Research Design. This study utilized a descriptive comparative research design comparing academically high-rated elementary schools to academically low-rated elementary schools.

Data/Description of Sample. The MS Department of Education's "Mississippi Succeeds Report Card and MAAP Test Scores, 2018" provided secondary data on 16 elementary schools in JPS for the 2017-2018 school year. The sixteen elementary schools selected represented eight high rated "A" and "B" schools and eight low rated "F" schools. The specific schools included in the comparison were Barr, Baker, Isable, Spann, Casey, Smith, Wilkins, Johnson, Watkins, Key, Raines, Oak Forest, Sykes, Lake, Pecan Park, and McLeod. The student population for this study is approximately 5,972 students across the 16 schools. Scores from the Mississippi Academic Assessment Program (MAAP) for the 2017-2018 school year measured student achievement.

Procedures**.** This study analyzed data by comparing statistical mean scores and percentages across the categories of accreditation ratings, median household income, teacher profiles, per pupil expenditures, and disciplinary measures. Bar charts and statistical tables present this study's findings for analysis and discussion.

Results

The following section provides a summary of this study's results comparing mean scores and percentages across selected socio-economic categories.
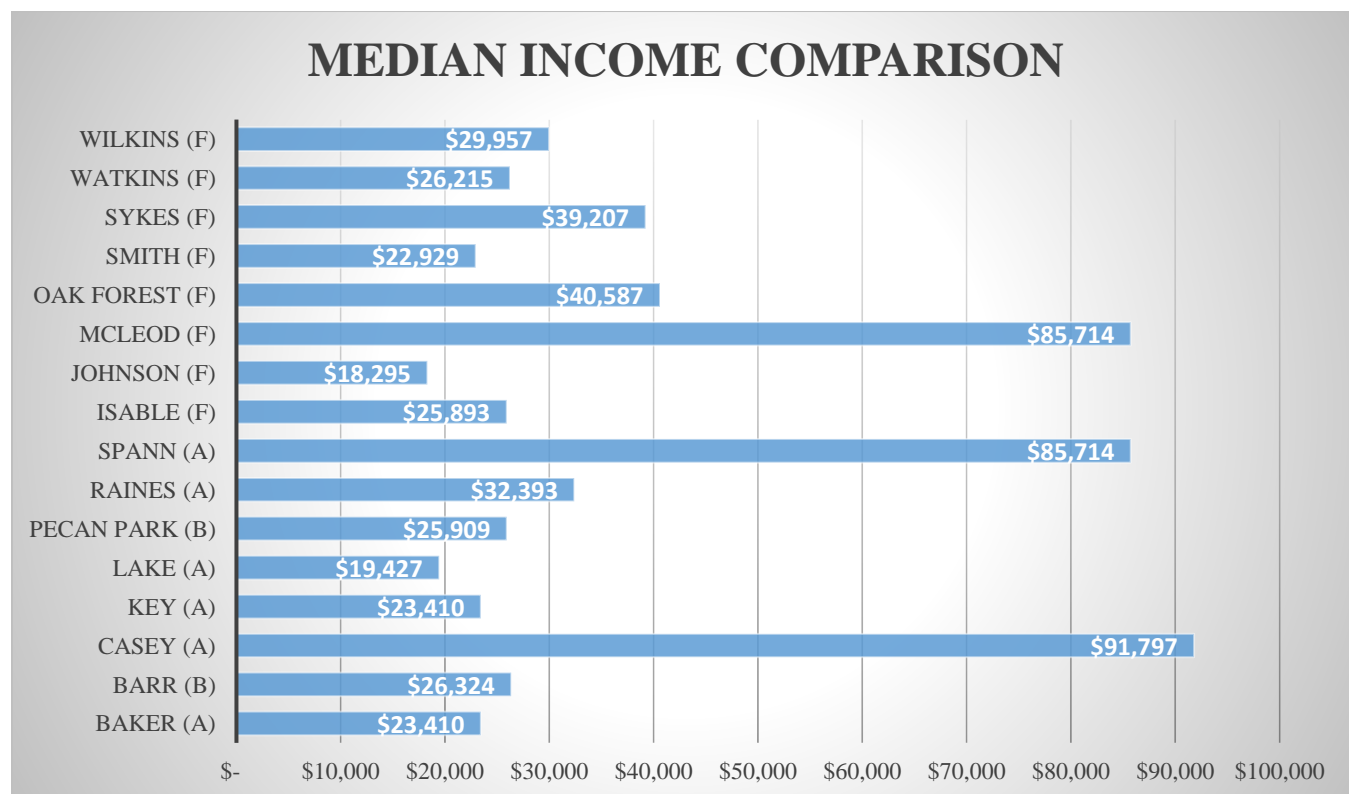
Median Incomes

The range of median household incomes spanned from $18,295 to $91,797, with two A-rated schools (Casey-$91,797 and Spann- $85,714) significantly exceeding the average income level of $38,573, and one F-rated school (McLeod - $85,714) also exceeding that average income level (See Graph 1). When comparing median household incomes by high- and low-rated schools, the F-rated schools had two schools with incomes under $25,000, and 6 schools with incomes over $25,000. The A-rated schools had three schools with incomes under $25,000, and 5 schools with incomes over $25,000 (See Graph 1).

Teacher Profiles

In regards to comparing teacher profiles among the schools, F-rated schools had a slightly higher percentage of experienced teachers (M=71.8) than A/B-rated schools (M=68.3). However, A/B-rated schools had a slightly higher percentage of in-field teachers (M=85.3) than F-rated schools (M=81.1) (See Table 1).

Graph 1- Comparison of Median Income

MEDIAN INCOME COMPARISON

School	Median Income
WILKINS (F)	$29,957
WATKINS (F)	$26,215
SYKES (F)	$39,207
SMITH (F)	$22,929
OAK FOREST (F)	$40,587
MCLEOD (F)	$85,714
JOHNSON (F)	$18,295
ISABLE (F)	$25,893
SPANN (A)	$85,714
RAINES (A)	$32,393
PECAN PARK (B)	$25,909
LAKE (A)	$19,427
KEY (A)	$23,410
CASEY (A)	$91,797
BARR (B)	$26,324
BAKER (A)	$23,410

Source: (MDE, Mississippi Succeeds Report Card, 2018)

Table 1 –Comparison of Teacher Profiles of Selected Schools

School Name	% Experienced Teachers	% In-field Teachers
Baker (A)	87.8	85.1
Barr (B)	67.3	84.3
Casey (A)	90.9	92.8
Key (A)	60.4	70
Lake (A)	87.5	89.1
Pecan Park (B)	46.2	96.2
Raines (A)	23.4	67.4
Spann (A)	82.8	97.1
Isable (F)	69.6	85.8
Johnson (F)	77.2	84.8
McLeod (F)	92	90
Oak Forest (F)	37.7	74.9
Smith (F)	94.6	93.2
Sykes (F)	62.9	72.2
Watkins (F)	73.4	78.8
Wilkins (F)	66.9	69.4

Source: (MDE, Mississippi Succeeds Report Card, 2018)

<u>Funding Per Pupil & In-School Suspension</u>
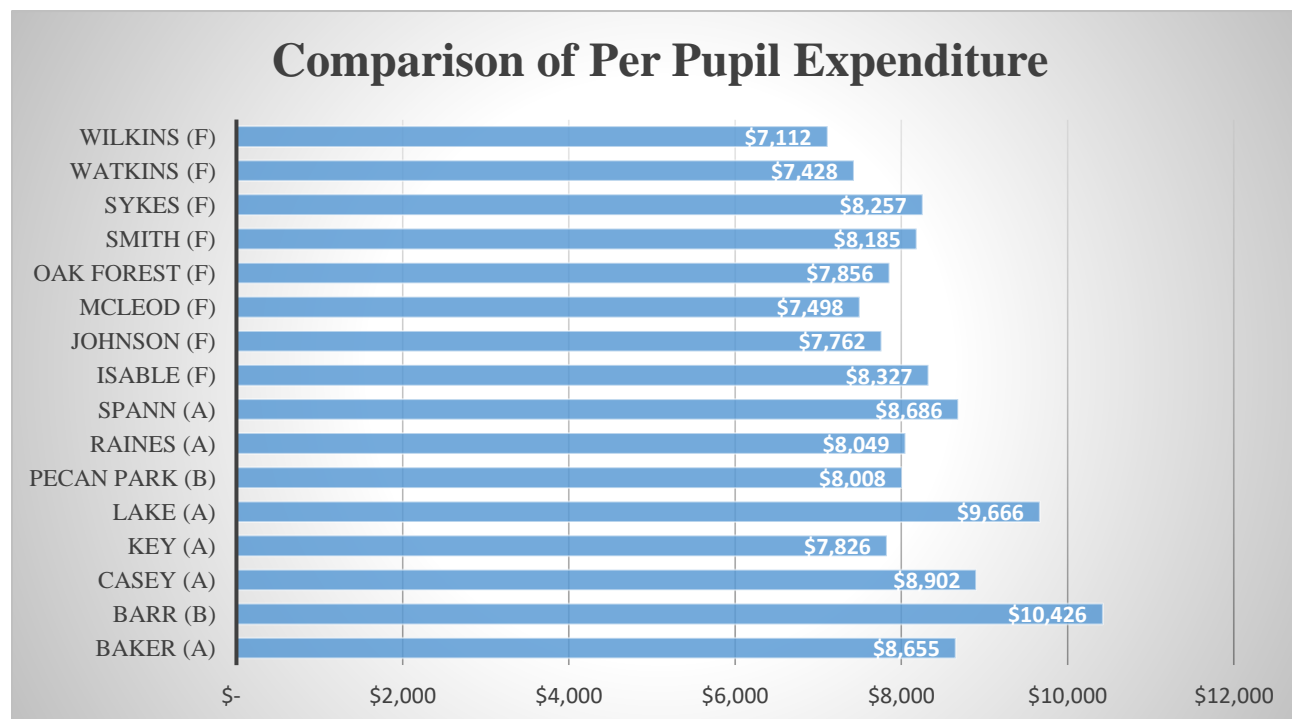
In comparing per pupil expenditures, A/B-rated schools had a higher funding amount average ($8,777) than F-rated schools ($7,803). Among the F-rated schools, per pupil funding ranged from $7,112 to $8,327, whereas A/B-rated schools ranged from $7,826 - $10,426 (See Graph 2).

In comparing in-school suspension rates, A/B-rated schools had a lower in-school suspension rate than F-rated schools (See Table 2). Of the A/B-rated schools, the lowest in-school suspension rate was <5%, and highest in-school suspension rate was 21.2%. Of the F-rated schools, the lowest in-school suspension rate was <5% and highest in-school suspension rate was 26.1%.

<u>Testing</u>

The Mississippi Academic Assessment Program (MAAP) test scores compared the two groups of schools. Two categories --- a scale score and a performance level score--- provided MAAP scores for Mathematics and Language. The performance level category has five levels that include Level 1 (Minimal); Level 2 (Basic); Level 3 (Pass); Level 4 (Proficient); and Level 5 (Advanced) (MDE, 2019). In regards to testing, the majority of students in A-rated schools scored at level 4 (Proficient) for English (36%) and level 3 (Pass) for Math (35.1%).

Graph 2—Comparison of Per Pupil Expenditure of Selected Schools

Comparison of Per Pupil Expenditure

School	Expenditure
WILKINS (F)	$7,112
WATKINS (F)	$7,428
SYKES (F)	$8,257
SMITH (F)	$8,185
OAK FOREST (F)	$7,856
MCLEOD (F)	$7,498
JOHNSON (F)	$7,762
ISABLE (F)	$8,327
SPANN (A)	$8,686
RAINES (A)	$8,049
PECAN PARK (B)	$8,008
LAKE (A)	$9,666
KEY (A)	$7,826
CASEY (A)	$8,902
BARR (B)	$10,426
BAKER (A)	$8,655

Source: (MDE, Mississippi Succeeds Report Card, 2018)

The majority of students in F-rated schools scored at level 3 (Pass) for English (36.1%) and level 2 (Basic) for Math (45.9%) (See Table 3).

A/B-rated schools had a larger percentage of students scoring at levels 4 and 5 for both English and Math, whereas F-rated schools had a larger percentage of students scoring at levels 1-3 for English and Math (See Table 3). For example, 36% of students scored at level 4 for English for A/B-rated schools, compared to 16.8% at F-rated schools. For Math, 25.8% of students scored at level 4 for A/B-rated schools compared to 8.4% at F-rated schools.

Table 2—Comparison of In School Suspension of Selected Schools

School Name	In School Suspension
Baker (A)	5.6
Barr (B)	6.1
Casey (A)	<5
Key (A)	13.8
Lake (A)	<5
Pecan Park (B)	9.1
Raines (A)	21.2
Spann (A)	7.1
Isable (F)	12.3
Johnson (F)	<5
McLeod (F)	10.2
Oak Forest (F)	<5
Smith (F)	<5
Sykes (F)	22.6
Watkins (F)	26.1
Wilkins (F)	18.6

Source: (MDE, Mississippi Succeeds Report Card, 2018)

Table 3- Comparison of Academic Achievement

English	Level 1 (Minimal)	Level 2 (Basic)	Level 3 (Pass)	Level 4 (Proficiency)	Level 5 (Advanced)
A-Rated	3.1	17.8	34.7	36	8.2
F- Rated	12	34.25	36.1	16.8	0.8
Math					
A-Rated	5	25.7	35.1	25.8	8.2
F-Rated	16	45.9	28	8.4	1.4

Source: (MDE, Mississippi Succeeds Report Card, 2018)

Overall, F-rated schools had higher rates of in-school suspension; slightly higher percentage of experienced teachers; lower percentage of in-field teachers; higher percentage of students scoring in levels 1-3; and a lower percentage of students scoring in higher levels (4-5) on testing. Median household incomes across the various schools averaged about $38,573, with some schools (Casey, Spann, and McLeod) exceeding the average median income.

Conclusions

This research study compared academic and socio-economic indicators shared by a group of high and low performing elementary schools in the Jackson Public School District. The goal of this research brief was to identify potential factors affecting academic performance within JPS elementary schools. Once identified, those factors would provide an empirical basis for applying interventions that can increase the chances of achieving academic success in socio-economically challenged schools.

Findings from this research study indicated there are key differences among certain socio-economic indicators when comparing A-rated and F-rated elementary schools (e.g., median incomes, funding per pupil). This study sought to answer two questions that could provide valuable insight into overcoming socio-economic challenges limiting certain students' academic success:

1.) What factors are contributing to the success of schools with low socioeconomic environments?

2.) How is it that schools in low socioeconomic environments are succeeding, but some schools in higher socioeconomic environments also appear to be struggling as indicated by their accountability rating and test score results?

Findings from this research study alone cannot provide definitive answers to the above questions. While this study identified some factors that are contributing to academic differences between high- and low-rated JPS elementary schools (e.g., median household income, teacher quality, in-school suspension rates, per pupil funding), there are still many factors needing further study. Analyzing secondary data can only reveal so much of the narrative taking place. Obtaining a more insightful analysis will require the use of additional qualitative research methods such as assessing school climate, conducting focus groups, interviewing and observing students, teachers, administrators, and parents. Conducting an in-depth study on a school such as Lake elementary (which has a relatively low median household income level, but has received A-ratings) would be highly beneficial for JPS officials and lower achieving schools within the district. This information can provide JPS an opportunity to highlight and document academic excellence within the district, and to use those findings to serve and influence other schools with similar demographics. If there is one key take-away from this research study, it is this . . . there are some JPS elementary schools who are succeeding academically in serving students from socio-economically challenged communities, but those schools are more the exception than the rule. Factors such as per pupil funding, teacher quality, and in-school suspension rates do make a difference in helping to determine which schools succeed and which schools fail. Schools generally having more favorable scoring on the above factors tend to do better academically. There is great potential value in documenting what makes some socio-economically challenged schools successful, and what makes other socio-economically advantaged schools struggle academically. Future research into those two areas could help improve the academic, social, and economic lives of JPS students, families, and communities.

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