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A Differential Analysis of Effectiveness in Middle and Low Socioeconomic Status Schools*

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ABSTRACT

A major focus of the Louisiana School Effectiveness Study has been the search for characteristics of exemplary schooling in varied economic contexts. In this paper differential results of analyses of effective, typical, and ineffective schools in middle and low socioeconomic neighborhoods are presented. Implications for practitioners and for future research are discussed.

INTRODUCTION

Within the past decade, a number of widely disseminated studies have listed school factors considered related to higher student achievement. Administrators around the country have undertaken school improvement programs based on altering those factors in their schools.

Critics have pointed out problems with the generalizability of results from these studies, many of which were conducted exclusively in economically underprivileged, urban schools. Hallinger and Murphy (1985) concluded that "practitioners should not treat the well publicized effectiveness factors as generalizable to all school settings." Both Good and Brophy (1986) and Purkey and Smith (1983) have referred to this generalizability issue as a major limitation of the existing school effectiveness research.

The focus of research in poor, urban schools and the emphasis in school improvement models on factors emerging from this research is a function of two tendencies: (1) an emphasis on equity considerations; and (2) the tendency of some school administrators to treat school effectiveness research results as fixed recipes for school improvement.

As Mitchell and Encarnation (1983) noted, school improvement models should include three overlapping goals: quality, efficiency, and equity (see

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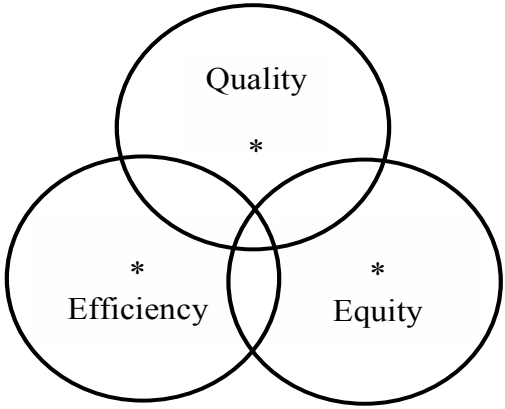
Figure 1. Three Overlapping Educational Policy Goals*



*Adapted from Mitchell and Encarnation (1983).

Figure 1). The emphasis on equity considerations has resulted in a relative neglect of efficiency and quality issues. This emphasis on equity considerations has also been associated with several research problems, including sampling difficulties and a reliance on criterion referenced test data as measures of student achievement.

The evolution of the school effectiveness research area in the equity direction is historically understandable, since poor, urban schools provide one of the most fertile and visible areas for research and for school improvement. Edmonds (1979) eloquently stated equity concerns when he said:

> Repudiation of the social science notion that family background is the principal cause of pupil acquisition of basic school skills is probably prerequisite to successful reform of public schooling for the children of the poor.

Scott and Walberg (1979) noted that Edmonds believed that emphasizing the impact of home factors on learning would "not only absolve educators of their responsibility to be instructionally effective, but (also) place unfairly the burden for learning on parents." Unfortunately, the Edmonds' position has led researchers to ignore differences in methods for achieving effectiveness in schools with students from different socioeconomic backgrounds.

D'Amico (1982) cautioned against using recipes, or lists of factors, for instigating school improvement, noting that there were inconsistencies in the results of the major studies on which the school improvement models were being built (e.g., Brookover & Lezotte, 1979; Rutter, et al., 1979; Duckett, et al., 1979; Edmonds, 1981). He also noted that each school's effectiveness is an "intricate, perhaps idiosyncratic phenomenon."

Lezotte (1982) responded that he and his colleagues were not asking educational leaders to follow recipes, but that the use of effective schools research as a framework for school improvement programs seemed timely.

We agree in part with both D'Amico and Lezotte. School improvement models based on the existing research are appropriate and can be cautiously and sensitively utilized in settings similar to those in which the underlying studies were based. Perhaps each effective school is not a wholly "idiosyncratic

phenomenon" - there do appear to be generic frameworks for creating effective schools. However, it is much too early to declare that the necessary steps to improve all schools are known - especially when discussing schools with student bodies from substantially different socioeconomic backgrounds than those of the urban poor.

This is not to argue that student socioeconomic status principally determines learning. Data from Phase Two of the Louisiana School Effectiveness Study (LSES-II) (Teddlie et al., 1984) indicate that school climate is as important, and in some respects, more important than student socioeconomic status in determining learning.

To ignore the effect of student socioeconomic status on the methods for producing effective schools may, however, be ill-advised. The dynamic interplay between the home and the school environment must be examined more thoroughly for complete models of school effectiveness to be developed. As Scott and Walberg (1979) stated, we should do nothing that "could impair collaboration between home and school to aid learning."

More research is needed on determinants of effective schooling in a variety of different neighborhoods. Differential models may need to be developed for school effectiveness in schools with students from different socioeconomic backgrounds. While some effectiveness factors may be the same regardless of the school context, other factors are likely to differ.

Fortunately, this type of differential research is emerging. In LSES-II, we looked at effective, typical and ineffective schools from middle and low socioeconomic status (SES) neighborhoods. Our results, briefly summarized in this article, indicate that effective schools in middle SES communities differ from effective schools in low SES communities. The same can be said for ineffective schools.

Other researchers are beginning to explore school effectiveness in varying socioeconomic contexts. Miller (1985) is currently investigating effectiveness in a sample of affluent schools. Hallinger and Murphy (1985) studied eight effective schools from a range of socioeconomic backgrounds (low, lower middle, middle and upper middle incomes). Their results indicated that these effective high and low SES schools vary on several dimensions, including style of principalship and the process for generating student educational expectations. Similarities between our results and those of Hallinger and Murphy will be further described in the discussion below.

METHOD

In the first phase of the LSES, we studied four different kinds of schools categorized on two dimensions: (1) those schools predicted to score high or low on state assessment tests, and (2) those schools which actually scored high or low on the assessment tests. Ten schools were included in these analyses, and a number of differences were found among the four different kinds of schools (Teddlie, Falkowski, & Falk, 1982).

We decided to report similar analyses in LSES-II, but we greatly expanded the scope of the comparisons. All 76 schools in which student, teacher, and principal school climate questionnaires were administered were included in these analyses (for a description of the sampling frame, see Teddlie et al., 1984). The analysis of variance design included two independent variables: (1) whether the student body of the school came from middle or low SES backgrounds; and (2) whether the student body scored above, at, or below how well they were predicted to score on the Educational Development Series, Level 5, (EDS), a standardized, norm referenced test used in the LSES-II.

A factor analysis of the students' parents' socioeconomic data was performed to divide schools in middle or low SES groups. The average education of the students' mothers, the average education of the students' fathers, the percentage of the students with fathers who had professional jobs, the percentage of the students with mothers who had professional jobs, and the percentage of the students who were white was determined for each school. These five variables were then factor analyzed, and one factor with an eigenvalue greater than 1.00 emerged. All schools with a SES factor score greater than zero were considered to be middle SES schools; all schools with a SES factor score less than zero were considered to be low SES schools. Thirty-eight of the schools were classified as middle SES schools, and 38 were classified as low SES schools.

While a single score was required to categorize a school as middle or low socioeconomically, data on all five socioeconomic variables were used in the multiple regression model predicting how well a school should perform on the EDS test. The regression model allowed the investigators to predict how well each school should perform on the EDS based on the five socioeconomic characteristics of the students. These predicted scores were then compared with the schools' actual scores, and a measure of the deviation from predicted score was made. This measure of deviation was the studentized residual (the difference between the predicted and actual score divided by the standard error for the difference). Twenty-five schools were categorized as scoring above their predicted score, 27 were categorized as scoring at their predicted score, and 24 were categorized as scoring below their predicted score.

The research design resulted in a fairly even distribution of schools, third grade teachers, and third grade students in each of the six types of schools as indicated in Table 1.

It should be remembered that the design employed in this study is an ex-post factor criterion-group design (Campbell & Stanley, 1963), and the reader is cautioned not to interpret causality in our results. These analyses produced simple descriptions of the characteristics of a variety of more and less effective schools as measured by a norm-referenced achievement test.

RESULTS

Most of this section will be devoted to presenting differences among the six types of schools in the school educational climate described by students, teachers, and principals on questionnaires that they completed. Before turning to these school climate descriptions, however, it is informative to look at

Table 1

Number of Schools, Teachers, and Students in Six Types of Schools

		Socioeconomic Characteristics of Students' Parents	
		Middle SES	**Low SES**
School's Performance Relative to Expectation	**Effective**	Number of Schools = 12 Number of Teachers = 37 Number of Students = 808	Number of Schools = 13 Number of Teachers = 35 Number of Students = 729
	Typical	Number of Schools = 15 Number of Teachers = 59 Number of Students = 1244	Number of Schools = 12 Number of Teachers = 50 Number of Students = 1079
	Ineffective	Number of Schools = 11 Number of Teachers = 27 Number of Students = 594	Number of Schools = 13 Number of Teachers = 40 Number of Students = 914

Table 2

Selected Means for Students' Parents' Socioeconomic Characteristics for Six Types of Schools

A. Average Education of Mothers'

		Socioeconomic Characteristics of Students' Parents	
		Middle SES	Low SES
School's Performance Relative to Expectation	Effective	3.35	2.70
	Typical	3.38	2.74
	Ineffective	3.28	2.87

B. Percentage of Students with Professional Fathers

		Socioeconomic Characteristics of Students' Parents	
		Middle SES	Low SES
School's Performance Relative to Expectation	Effective	.33	.11
	Typical	.43	.12
	Ineffective	.33	.10

*For mother's educational level; 2 = attended high school; 3 = graduated from high school.

differences among the schools on basic variables such as test performance and socioeconomic backgrounds of students. These differences will help set the stage for differences in the school educational climates that will be described later.

The selected means on the students' parents' socioeconomic characteristics presented in Table 2 confirm the large differences in socioeconomic backgrounds of students from the middle and low socioeconomic schools. The average score for each of the three middle socioeconomic groups is higher than that for each of the three low socioeconomic groups on mothers' education and fathers' occupation variables.

Selected means on test performance for the six types of schools are found in Table 3. On the EDS Basic Skills Test, which includes EDS Reading, English and Math Tests, the order of scores from the highest to the lowest is as follows: effective, middle socioeconomic; typical, middle socioeconomic; effective, low socioeconomic; ineffective, middle socioeconomic; typical, low socioeconomic; ineffective, low socioeconomic. An interesting aspect of this pattern of scores is that the effective, low socioeconomic schools actually outscored the ineffective, middle socioeconomic schools.

Results from the analyses of these six types of differentially effective schools are found in detail elsewhere (Teddlie, Falkowski, Stringfield, Desselle, & Garvue, 1984; Teddlie & Stringfield, 1985). In this section, we will briefly note the highlights of these analyses.

LSES-II analyses indicated the following characteristics of *middle SES, effective* schools:

a. Teachers were in frequent contact with parents and perceived parents as being highly concerned with quality education.
b. Teachers reported having high present and future academic expectations for their students.

Table 3
Performance on EDS Basic Skills Tests for Six Types of Schools

		Socioeconomic Characteristics of Students' Parents	
		Middle SES	**Low SES**
School's Performance Relative to Expectation	**Effective**	108.13	97.06
	Typical	103.70	91.53
	Ineffective	93.75	85.61

c. Teachers accepted responsibility for students' outcomes and actively worked with students toward the realization of these high expectations. This attitude was reflected in students' reports noting that teachers cared about them and pushed them to achieve academically.
d. These schools had the highest percentage of teachers teaching third grade exclusively.
e. The students apparently internalized the high expectations expressed by teachers and parents. Students in high achieving, affluent schools had higher expectations for themselves than did their peers in equally affluent schools with lower achievement. The general climate from the effective, affluent schools was one of concern for excellence from all the major participants -- principals, faculty, students and parents.

Characteristics of *middle SES, typical* schools included:

a. Compared with teachers in the middle SES, effective schools, the teacher in middle SES, typical schools took less responsibility for the academic achievement of their students.
b. Compared with students in the middle SES, effective schools, students perceived lower expectations from their teachers and parents; students also perceived less teacher push.

Schools characterized as *middle SES, ineffective* schools had the following characteristics:

a. Teachers had unrealistically high perceptions of their students' current level of academic achievement; they appeared to base their perceptions on intrinsic student characteristics such as student SES.
b. Students' future academic expectations are not as high as those of other middle SES students.
c. The principals' academic expectations were lower than those of the teachers.
d. The principals stated that several aspects of student development (enhancing social skills, personal growth and development, education/occupational aspirations) were as important at their school as teaching of academic skills. The principals may have been expending too much of the school's resources in non-academic endeavors in these schools.
e. Principals' actions did not appear to effect changes in these schools. Combining teachers who believed that high achievement generates itself spontaneously] with relatively unmotivated students resulted in underachievement.

Characteristics of the *low SES, effective* schools include:

a. While principals and teachers had modest long term expectations for their students' achievement, particulary in regard to higher education, they

held firm academic expectations for their students while at their school.
b. Teachers reported spending more time on reading and math, and assigning more homework than either of the other two low SES groups.
c. Students perceived teachers as pushing them academically. They also reported receiving more help from their teachers than did students in less successful, low SES schools.
d. Students perceived their teachers as having high expectations for them in their current classrooms.
e. Teachers reported that principals visited their classrooms frequently.
f. The teachers in this group were the youngest and least experienced of the low SES groups.
g. The teachers in this group were the most likely of all the teachers to have teacher's aides.
h. Principals in these schools were the most likely to say that they had the major input in hiring their teachers. Twenty-three percent of the principals in the effective, low SES schools say that they hired their own teachers. No other group of schools had higher than nine percent of its principals report this power.

These less affluent, successful schools had principals who motivated teachers who, in turn, motivated students. The ability to instill in students a belief that they can learn is critical in low SES, effective schools. Apparently, students in middle SES, effective schools had this belief instilled at home and reinforced at school.

Characteristics of *low SES, typical* schools included:

a. Teachers in this group perceived themselves as having greater influence on student attitudes and held higher future academic expectations for their students compared with other low SES groups.
b. Parents were viewed by teachers as being more concerned and having higher expectations than other low SES groups.
c. Students viewed their teachers and parents as having positive perceptions of their school work; students were viewed by teachers as having high expectations for themselves; students viewed their teachers as being less demanding academically and less critical than students did in the low SES, effective schools.

It appeared that these positive perceptions, high expectations, and teacher praise coupled with the idea that teaching efforts are of the right kind and amount resulted in a lesser focus on student achievement.

Characteristics of *low SES, ineffective* schools include:

a. An overall negative academic climate in these schools appears to have contributed to the low achievement of students. Of all the groups, teachers had the lowest expectations for students in their schools and rated them the lowest academically; the teachers accepted little responsibility for and perceived having little influence on student outcomes; they also appeared less satisfied with teaching and perceived themselves as unsuccessful in helping students attain goals. It should be remembered that students in this group are at the same SES level as students in the effective, low SES group.
b. Principals gave their students low ratings on achievement.

c. When compared with students in other low SES groups, students perceived their teachers as less praising, less caring, less helpful, and more critical. Of the six groups, these students reported that their teachers felt learning was the least important.
d. Principals, teachers, and pupils all perceived the lack of achievement-within the schools.
e. A higher percentage (21 percent) of teachers in these schools would rather teach in another school than any other group. By contrast only 2 percent of the teachers in middle SES, typical schools wanted to teach elsewhere, while 12 percent of those in effective, low SES schools wanted to teach elsewhere. Teachers in the low SES ineffective schools were absent an average of 3.51 days in the fall semester of LSES-II, while teachers in low SES, effective schools were only absent an average of 2.03 days.

DISCUSSION

As noted in the introduction, LSES-II is one of very few studies which examine differences in effective (or ineffective) schools from different contexts (socioeconomic, geographical, etc.). As the results from these studies accumulate, we may see the development of differentiated frameworks for school effectiveness depending on school context.

This trend in the school effectiveness literature may signal greater emphasis on quality and efficiency issues in the school improvement movement. While it is immensely important to determine factors that will help the underprivileged achieve, it is also important to identify the best ways to increase effectiveness in all our schools, including those in more affluent neighborhoods.

LSES-II data indicate that some school effectiveness factors are constant. For example, having an orderly, well-disciplined environment is a prerequisite to effectiveness regardless of context.

On the other hand, we found differences in the particular frameworks for predicting effective schools given different school contexts. School improvement programs need to take these differences into consideration.

LSES-II provided a unique database for the study of the differentiated nature of effective schooling, due to the large number of schools from different contexts in the study sample. The data for the differential analysis reported here were gathered during the macro phase of the LSES (see Teddlie, Stringfield, & Desselle, 1984) Our Phase II database does not include as much rich qualitative data as other case studies (e.g. Hallinger & Murphy, 1985). LSES-III was designed to provide more of this in-depth qualitative information in comparing matched pairs of effective/ineffective schools (see Stringfield, Teddlie, & Suarez, 1984).

Despite differences in sample size and specific research methods, however, there are interesting similarities in the results of LSES-II and those of Hallinger and Murphy (1985). The remainder of this discussion will focus on two of those similarities: (1) different principalship styles in middle or high SES schools as opposed to low SES schools; and (2) different aspects of expectation for student achievement in these two general SES contexts.

In LSES-II, we found principals in low SES, effective schools to be very visible in the classrooms and to be very demanding of teachers to get high achievement from their students. By contrast, principals in middle class, effective schools were less visible in the classrooms. Apparently their teachers

had already accepted great responsibility for the achievement of their students, so the principals did not feel a need to spend as much effort instilling this in the teachers.

Hallinger and Murphy (1985, p. 32) noted that, "Principals in the low SES (effective) schools tended to be more task oriented ... In contrast, principals in the higher SES (effective) schools were less directive and more collegial in working with staff." We agree with Hallinger and Murphy (p. 33) that our findings "lend tentative support to researchers who argue that leadership is malleable and context dependent rather than fixed."

Much previous school effectiveness research had advocated a principalship style similar to that found in our and Hallinger and Murphy's low SES, effective schools. This style may be inappropriate in more affluent schools where teachers and students have already internalized high achievement expectations.

Hallinger and Murphy (1985) also note that:

> Students in low income schools - generally ... place a lower value on schooling. In such cases the school must take systematic measures to reward and recognize the behavior it seeks to promote .... Students in high SES elementary schools generally come to school with a ... more positive academic orientation. Their home background is more likely to instill them with a high valuation of schooling. This combination of factors promotes higher expectations among the school staff and enables pupils to experience success in school more quickly (p. 34).

LSES-II results demonstrated this same difference in the production of high educational expectations for students: teachers simply reinforce achievement motivation already learned at home in middle SES, effective schools; in low SES, effective schools, the teachers must often create that achievement motivation.

School improvement proponents might consider this difference in the way expectations appear to be generated. It may be inefficient to expend staff time engendering high achievement expectations in more affluent schools. Perhaps time would be better spent on teaching higher level academic skills.

While these conclusions about differences between effective (and ineffective) schools from different socioeconomic contexts are tentative, they point out the richness of information that such studies can yield. Future studies in this area should prove rewarding. ■

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