ABSTRACT
        Four general types of literature related to school
effectiveness are reviewed in this paper and the more consistent
research findings synthesized. The literature types considered are
case studies (descriptions of effective schools), comparative studies
(comparisons of effective and ineffective schools), program
evaluations (examinations of effectiveness-oriented programs), and
reviews of the school effectiveness literature. The literature is
divided into three groups for coherent synthesis: group 1 consists of
five case studies and a review of the literature, all of seminal
significance and frequently cited; group 2 includes studies and
reviews that address further the issues raised in the studies in the
first group; and group 3 studies do not utilize measures of student
achievement and are the least frequently cited. The synthesis of this
literature begins with consideration of definitions and concepts of
school effectiveness and of qualifications limiting the applicability
of the research findings. The review then discusses the major factors
affecting school effectiveness as identified in the research,
including time on task, expectations for student achievement, student
success rates, curriculum alignment, staff task orientation, behavior
management techniques, school environment, staff cooperation,
instructional leadership, parent participation, and instructional
practices. A bibliography lists the 107 documents reviewed.
(Author/PGD)

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CONSIDERING THE RESEARCH:

WHAT MAKES AN EFFECTIVE SCHOOL?

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WHAT MAKES AN EFFECTIVE SCHOOL?

Introduction

What makes an effective school? In recent years, general public concern for the quality of education has become increasingly vocal. Parents and students have sued school districts for graduating poor "products"; concern over "social promotion" has led districts to retain more and more pupils; and publicity about test scores--of both students and teachers--has enlivened public discussion about the state of education. In the last 25 years, researchers have attempted to answer the question at the heart of this discus.ion: what makes a school effective? The body of this literature now is sufficiently comprehensive that some answers--while tentative--are becoming clear. Comparisons of "effective" and "ineffective" schools have yielded some factors in both program and personnel areas that are related to school effectiveness.

This paper considers four general types of literature related to school effectiveness: case studies (descriptions of effective schools), outlier or comparative studies (comparisons of effective and ineffective schools), program evaluation (examination of effectiveness-oriented programs) and reviews of school effectiveness literature. This paper synthesizes the more consistent findings of studies which have used objective measurement processes to analyze the characteristics of effective schools.

Synthesis Framework

The body of school effectiveness literature is notable for its variety of definitions and approaches to the study of the effective school environment. Therefore, to assure a coherent synthesis of the literature in this area, the information available for synthesis has been categorized into three groups. Classification of a reference in any of the three groups in no way speaks to the inherent quality of the review or study. References for all three groups can be found in the bibliography beginning on page 27.

Group 1 is made up of five case studies and one review of the literature. These were placed in Group 1 because they seemed to work together to construct a framework for the study of school effectiveness. Each provides an insight into a "new" area which subsequently was developed further by other researchers/scholars. Group 1 studies appeared to be quoted often in other school effectiveness literature. Table 1, beginning on page 3, provides more information about Group 1 references by listing the name of the study/review, persons involved, definition or criterion for the effective school, sample information, and, where expressed, findings and magnitude of the effect of the variables studied.

References in Group 2 are studies and reviews which further analyze or address some of the findings/correlations associated with the effective school and utilize some measure of student achievement in their study/review. Group 2 studies are moderately quoted in other literature.

Group 3 references relate to the study of school effectiveness generally. Studies which do not utilize some measure of student achievement are in this group. Group 3 references tend to be less frequently cited in other school effectiveness literature.

Although categorization of this sort is always risky and open to discussion, this approach is helpful in sorting through a rather large quantity of information. Research and reviews from all three groups were considered in preparing this synthesis.

Table 1

GROUP 1 STUDIES/REVIEWS

AUTHOR(s) TITLE	YEAR	DEFINITION/ CRITERIA	TYPE	SAMPLE	FINDINGS	MAGNITUDE OF EFFECTS
Coleman, J. Campbell, E. Hobson, C. McPartland, J. Mood, A. Weinfeld, F. York, R. Equality of Educational Opportunity (The Coleman Report)	1966	None stated	National Survey	"School Survey Tests" were administered to sampling of metropolitan and non-metropolitan 1st, 3rd, 6th, 9th, and 12th grade students across the nation. Care was given to involving proportional numbers of blacks and whites. Surveys were developed by Educational Testing Service. Teacher, principal and superintendent questionnaires were used to collect additional data. Total number of surveys used in data analysis was approximately 570,000. Approximately 70,000 questionnaires were collected.	Coleman's report generally found that much of the difference in achievement outcomes across schools could be explained by the social status and/or racial composition of the school student body. The Coleman Report found the following in relation to student achievement: (1) when socioeconomic background is controlled, differences between schools account for only a "small fraction of differences in pupil achievement"; (2) the average minority student's achievement might suffer more in a school of low quality than would "white students' achievement"; (3) student achievement is strongly related to the educational backgrounds and aspirations of the other students in the school.	Coleman's report contains various numerical comparisons according to various study variables.
Weber, G. "Inner City Children Can Be Taught to Read: Four Successful Schools"	1971	Defined effective schools in terms of: (1) Strong principal (3 schools); Strong district leadership (1 school) (2) High expectations for student achievement (3) Relatively quiet, orderly, purposeful atmosphere of school (4) Low student-teacher ratio and additional reading personnel to increase reading "expertise" during reading instruction time (5) Phonics in reading curriculum	Case Study	4 public elementary schools (1 in Los Angeles, 1 in Kansas City and 2 in New York)	Characteristics not found to be part of effective reading program included: (1) small class size (2) achievement ability grouping (3) quality of teaching (4) ethnic background of instructional staff (5) professional educational status and (6) outstanding physical facilities	None stated.

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Table 1

GROUP 1 STUDIES/REVIEWS

AUTHOR(s) TITLE	YEAR	DEFINITION/ CRITERIA	TYPE	SAMPLE	FINDINGS	MAGNITUDE OF EFFECTS
Brookover, W.B. Lezotte, L. Changes in school characteristics coincident with changes in student achievement	1977	Improving School or Effective School = increase of at least 5% in percentage of students attaining 75% or more of tested objectives and a decrease of 5% or more in students attaining 25% or less of tested objectives during 1974-1976. Declining School = decrease of at least 50% in students attaining 75% or more of tested objectives and increase of 5% or more attaining 25% or less of tested objectives during 1974-1976.	Case Study	8 Michigan elementary schools (6 "improving" schools and 2 "declining" schools).	Improving schools differed from declining schools in terms of: (1) emphasizing accomplishment of basic reading and mathematics objectives (2) expressing belief that all students could master basic skills objectives (3) having higher expectations for students educational accomplishments (4) assuming responsibility for teaching basic skills (5) spending more time in reading instruction (6) having principal who is an instructional leader, assertive, a disciplinarian and responsible for basic skill achievement (7) more accepting of concept of teacher accountability (8) having higher levels of parent-initiated contact but less overall parent involvement (9) involving teachers in identification/teaching of compensatory education classes	None stated.

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Table 1

GROUP 1 STUDIES/REVIEWS

AUTHOR(s) TITLE	YEAR	DEFINITION/ CRITERIA	TYPE	SAMPLE	FINDINGS	MAGNITUDE OF EFFECTS
Brookover, W.B. Beady, C. Flood, P. Schweitzer, J. Wisenbaker, J. School social systems and student achievement: Schools can make a difference	1979	HIGH ACHIEVING SCHOOL WAS determined on the basis of whether the school scored above the sample mean for the white/ black racial groups	Case Study	91 Michigan elementary schools randomly selected from all Michigan elementary schools in correlational study; 4 elementary schools in case study. Schools were paired by race, socio-economic status, and urban location. Each pair consisted of a high and low achieving school.	Study found the social system to explain approximately 85% of the variance between groups in reading and math achievement. Case study found the following common characteristics of high achieving schools: (1) principals who emphasize achievement and teacher performance; perform administrative and instructional leadership roles; (2) immediate, appropriate and clear feedback on appropriate behavior in classroom; (3) differentiation of programs; (4) teachers had high expectations for student achievement (above grade level or growth of at least a year); (5) use of competitive team games; (6) teachers accepted responsibility for student achievement; (7) greater time in instruction and interaction between students and teachers.	None stated.
Rutter, M. Maughan, B. Mortimore, P. Ouston, J. Smith, A. Fifteen Thousand Hours	1979	No specific definition given. Variables (outcome) of study, however, indicate criterion areas.	Case Study	12 inner-London schools Study of the following outcome variables occurred: (1) student's behavior in school (2) attendance (3) examination success (4) employment (5) delinquency	General results of study showed correlations between the more effective schools and certain outcomes. Those positively correlated with positive academic outcomes were in the areas of: display of student work, number of school outings, teacher views considered in administrative decision-making, students' report "approachability" of staff, positions of responsibility held by students (40-50%), teachers checked regarding assigning of homework, general standards of classroom discipline, school library use, frequency of teachers' interactions of whole class, student participation in assembly/class meetings, pupil conditions, homework given to students and teacher expectations for pupil success on exams.	Statistical results given for each outcome area enabling a gauge of the effect.

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Table 1

GROUP 1 STUDIES/REVIEWS

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AUTHOR(s) TITLE	YEAR	DEFINITION/ CRITERIA	TYPE	SAMPLE	FINDINGS	MAGNITUDE OF EFFECTS
Edmonds, R. "Effective Schools for the Urban Poor"	1979	Effective school is one that "brings the children of the poor to those minimal measures of basic school skills that now describe minimally successful pupil performance for the children of the middle class."	Review of the Literature	This review of the literature cites 38 studies/reviews/articles on the topic of school effectiveness. Edmonds identifies five "indispensable" characteristics of the effective school and suggests a new criterion level for the concept.	Edmonds' review of the literature identifies these effective school characteristics: (1) strong administrative leadership (2) climate of expectation in which no student is permitted to fall below minimum but efficacious levels of achievement (3) orderly and quiet atmosphere which is conducive to learning but is not rigid or repressive (4) philosophy that student acquistion of basic school skills takes precedence over all other school activities (5) frequent monitoring of student progress	None stated.

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Definition

One of the first questions asked by persons interested in the subject of effective schools is, "How do you define it?" Researchers continue to disagree on what factors should be included in a definition of an effective school. In conducting research, however, the researcher must be particularly concerned with the method by which he/she will measure effectiveness. Careful measurement, of course, is necessary to determine whether desired changes have occurred or something out of the ordinary is being observed. Allowing the definition of the effective school to include difficult-to-measure events (such as the extent of parental encouragement to succeed in school, general morale of staff, emotional well-being, or level of competence of teachers) makes research more difficult and could make the results of such research more ambiguous.

Some school effectiveness researchers have not developed a definition of the effective school. Many others have attempted to define the effective school in terms of measurable student outcomes. The reasoning for this seems clear in that the quality of the "product" of the school--the student--is, in essence, the most critical element of the effective school.

Definitions of researchers vary from being simple measures of high student achievement to measures of complex positive teacher and student attitudes and behavior measurements. For example, Little (1980) studied school success in relationship with staff development. Another researcher (Edmonds, 1979) defined the effective school in terms of how well schools performed for the poor in their population: when low income students achieved at the level of their middle-class peers, the school was to be considered effective. In a longitudinal study conducted in London, Rutter (1979) defined the effective school in terms of consistent demonstrations of achievement test score gains, low absence rates, and positive student behavior such as low delinquency rates and appropriate classroom behavior. Other studies such as that by Stallings and Mohlman

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(1981) defined the effective school as one that has high teacher morale, teachers implementing a specific time use program (the Effective Use of Time Program), students "on task" more frequently, low absence rates, an environment that is a "friendly place in which to be," and less litter and vandalism. This study utilized no measures of student achievement in its definition.

For the purpose of this paper, the effective school is defined in terms of student achievement test scores in basic skills areas. This means that research utilizing a methodology which determined the change in student's basic skill achievement test scores was primarily considered in this synthesis. This criterion is used not because it provides a complete or even the best definition, but because most research in this field uses this measure consistently to determine correlations with the effective school environment.

This basic criterion is used in an effort to envelop a large body of information. Developing the "complete" definition of the effective school is not the purpose of this synthesis. The definition used in this paper is intended to apply to all students, however. This would disallow the possibility of a school being called effective which produces significant increases by some students while producing none for others. In addition, this criterion would eliminate such things as socio-economic status, race, and sex, as justifiable factors for lack of achievement test score increases.

Concept of School Effectiveness

The concept of the effective school is a rather complex one. This may partially explain professional disagreements over the nature of the effective school. Seven points are important to remember when considering this subject:

● The effective school does not utilize some mysterious machine or secret instructional material which automatically results in effectiveness. The factors which make up the effective school are common to all

school environments; that is to say, the major parts of the effective school involve familiar school components.

● In order to determine characteristics which seem to be correlated with effective schools, researchers studied schools they judged to be effective. Thus, research results describe the effective school in terms of how various researchers have defined effectiveness and what factor or set of factors are observed while in the school.

● Research is reported in terms of the commonalities of the effective school or schools. The frequency or consistency of certain factors associated with the effective school generally is used to determine the common characteristics. Those characteristics which are unique to a particular school usually are not discussed in school effectiveness research.

● Effectiveness is part of a qualitative continuum upon which ineffectiveness also appears. Because effectiveness can be defined in a variety of ways, the configuration of effective school factors may interrelate in different ways. Basic factors of the effective school environment or ethos include the following:

Attitudes	Instruction	Staff
Community Involvement	Leadership Roles	Students
Facilities	Parent Involvement	Other factors
Goals	Skills	

Because each of these factors is qualitative, each can vary from setting to setting in equally effective schools.

● The effective school environment is one that contains "central actors" which create the environment while also being significantly affected by it; the central actors in the effective school are school staff, students, parents, community, and facilities. As we have said, the research in this area has been largely descriptive. Because of this, we must realize when looking at the literature that we are unable to determine cause and effect. This can be seen when one asks the question, "Does the effective teacher create the effective school or does the effective school influence the teacher to behave in certain effective

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ways?" The work of many noted researchers in this field (Brookover, 1981 and Rutter, 1979) indicate that the environment or ethos of the effective school makes the central actors perform in common ways. The exact proportion of factors which make up the effective school are not known. It is highly probable that there are many combinations which would result in improved effectiveness within school environments. Figure 1 demonstrates some of the interrelatedness of the major categories of research findings dealing with the effective school. The number of actors might enlarge if the effective school is defined in terms of factors other than those shown in the center of the figure.
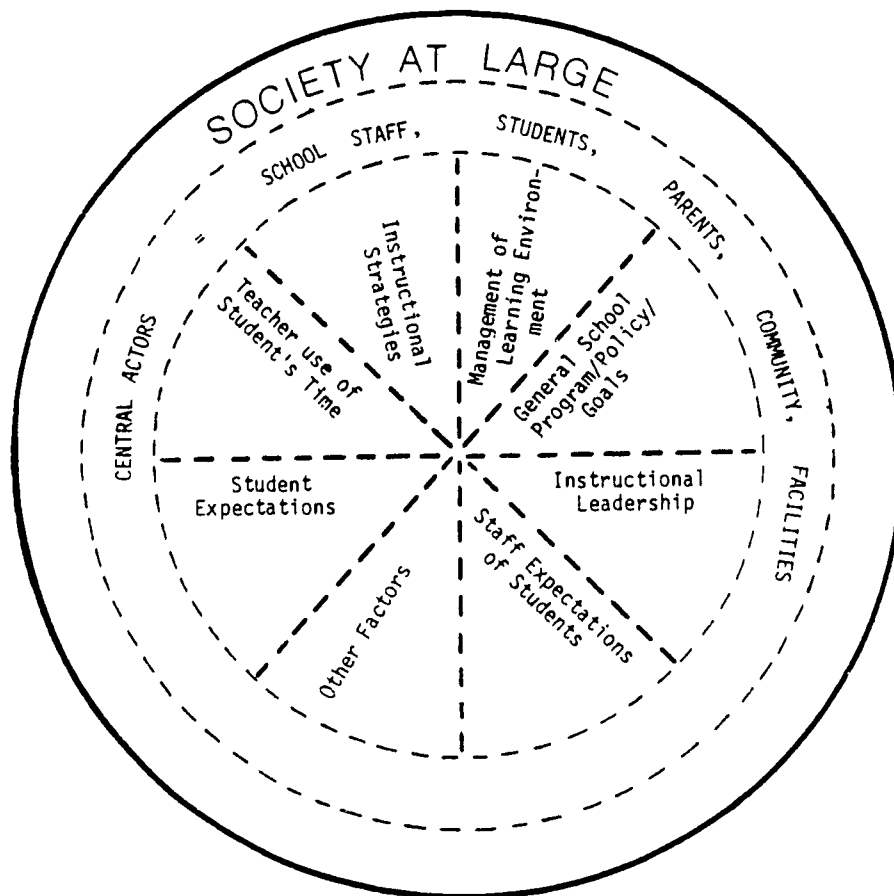
Figure 1

● Curran (1982), interpreting major research studies, listed the major areas of effective school research as being strong leadership of the principal, orderly school climate conducive to learning, emphasis on the basic skills, teacher expectations of high student achievement and a system for assessing student performance. The means by which he suggested the effective school be identified was through the scores of students on basic skills tests. Figure 2 presents an enlarged picture of some of the major characteristics correlated with the effective school. Again, these do not represent all of the correlated characteristics.
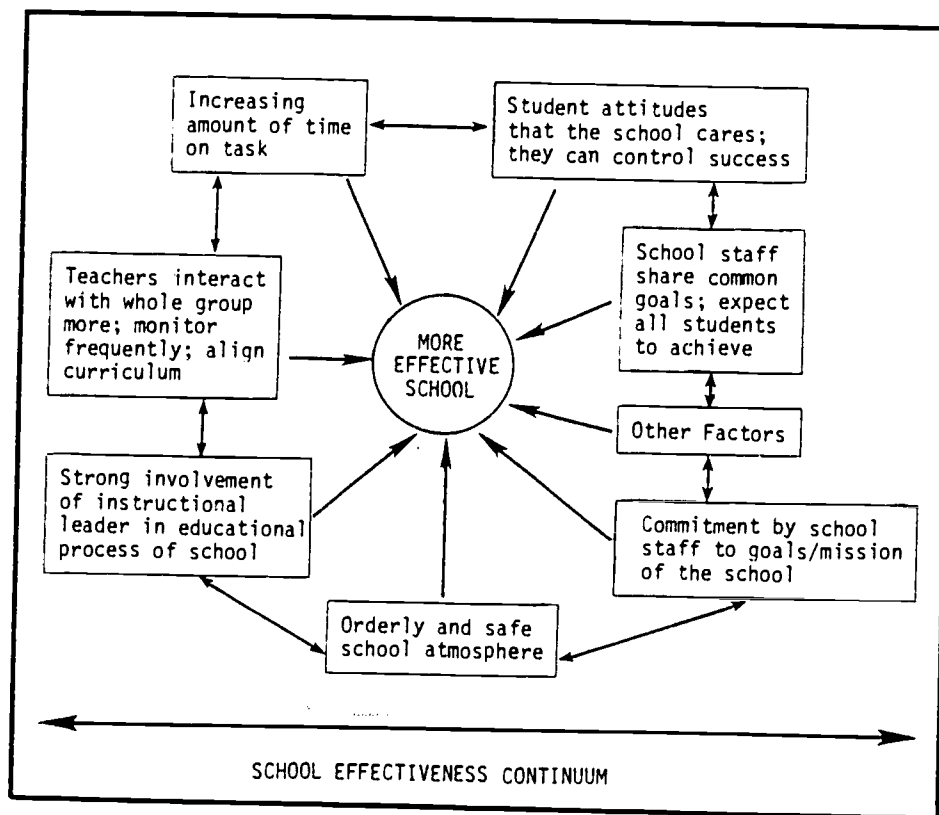
Figure 2

While this figure might imply that each correlate or characteristic creates or has a direct relationship to the development of a more effective school, this has not been proven through the research. As noted, each of the characteristics given here is shown to be somehow

interrelated. The exact way in which these characteristics are related, however, has not been identified through research. It is also important to bear in mind that these characteristics describe the effective school rather than cause the effective school. Therefore, these characteristics are enclosed by "effectiveness parameters" which imply that all of the characteristics lie somewhere on the school effectiveness continuum.

● In looking at the research dealing with school effectiveness it is important to note the way in which determination of the school's effectiveness was made. This can be referred to as the methodology of the research design. At any rate, there are many outcomes or results of the educational process that can be used to determine effectiveness. Figure 3 is only one configuration of the possible outcomes which could be used.
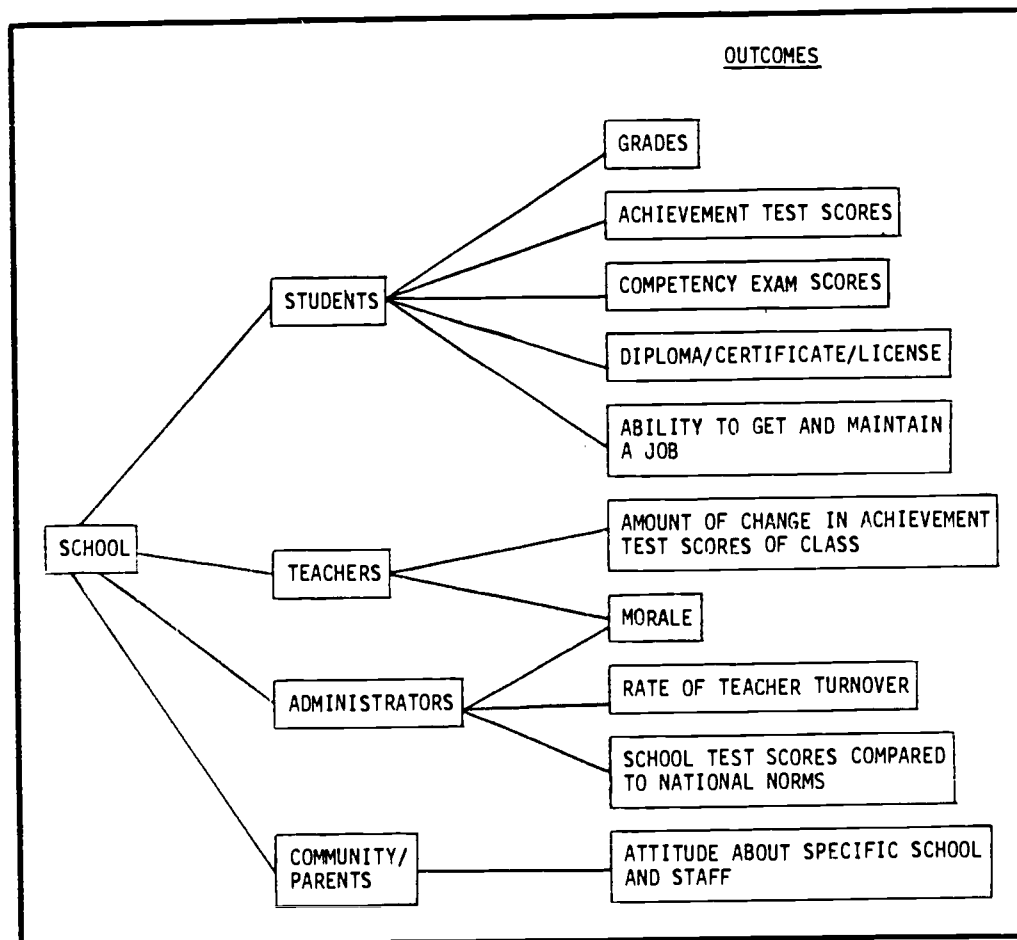
Figure 3

In an effort, probably, to use a measure which would be somewhat objective and allow for comparison between schools, the outcome of student achievement test scores has been widely used by researchers. Increases in achievement test scores have been shown to be correlated with certain descriptors or characteristics of the effective school. It is probable, however, that through repeated studies it would be possible to establish many more correlations between other outcomes and the effective school. At any rate, it is important to note that the way in which outcomes are selected to determine the effective school will dictate, to some extent, what the researchers will find.

Qualifications

The research dealing with school effectiveness should be considered in light of several qualifications. These qualifications, of course, affect the ways in which the research findings can be used.

One qualification involves the measure by which schools are deemed effective or ineffective--student achievement test scores. While test scores are easily measurable over time, many factors are not evaluated in achievement testing but generally are considered to be part of an "effective" school's product. In other words, such tests do not indicate whether a student can participate as a member of a group effectively or can participate in the functions of the community after graduation. Achievement test scores do not reveal factors such as the rate of teacher turnover in a school setting or the general level of teacher morale. So, by using achievement test scores as the primary measure of effectiveness, research, to this point, may have overlooked some areas which also relate to the total effective school environment.

A second limitation of this research involves the generalizability or applicability of findings. Data relating to how an ineffective school can be transformed into an effective school are very rare in the school effectiveness research. There is little theory as to how the change process from ineffective to effective school can be brought

about. In addition, because the bulk of the literature deals with the urban elementary school and effectiveness in these settings is generally measured by standardized achievement test scores in the basic skills areas (usually arithmetic and reading), generalization of results to other settings is highly questionable.

Third, the school effectiveness research is severely limited by the lack of studies which provide data concerning the magnitude of achievement variations between study groups of effective and ineffective schools. Correlations of factors with the effective school environment do not provide adequate information in this area.

Studies which compare effective and ineffective schools produce characteristics for each kind of school. Comparing the "best" with the "worst" may not result in characteristics which speak to the larger number of "average" schools. No matter what criteria are used to define the effective school, it would seem more appropriate to compare effective and ineffective schools with average schools rather than with each other.

Longitudinal studies in the area of school effectiveness are extremely rare. The relationship of the "snapshot" approach—sampling a specific grade level or sets of levels for a relatively short period of time—to the effective school is not clear. Changes which occur over time in the educational process and, in particular, in the production of the effective school have largely gone unstudied. Those analyzing school effectiveness research with this perspective legitimately may question the effectiveness of the "effective" school if, for example, one-third of the students drop out before completing the twelfth grade. The non-longitudinal "one-shot" or "snapshot" research design, utilizing a definition of effectiveness which revolves about achievement test scores, does not have the scope to answer this question.

Lastly, the tacit implication of most school effectiveness research is that there is a clear-cut point at which effectiveness begins. This, however, is not evident. Further, the literature seems to imply

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that once a school is deemed effective it remains effective in the future. Factors associated with the maintenance of the effective school environment have not been studied in depth. The researcher, however, analyzing schools which have recently become effective may be measuring a different set of variables than those within the school which has a long history of effectiveness.

Selected Effectiveness Characteristics

This paper describes characteristics that have been found in the research to be correlated with the effective school environment. Citations note studies or syntheses which can be used by the reader to learn more in the given area.

Time on Task

Research indicates that teachers within effective schools have students engaged in high levels of task-oriented "academic" activities. Studies conducted by Ramey, Hillman and Matthews (1982), Madaus (1980), Berliner (1979), and Bloom (1974) all indicate that the amount of time spent on academic learning tasks is positively correlated with students' achievement test score increases. As pointed out by Cooley and Leinhardt (1980), however, the amount of time scheduled for a specific subject is not correlated with achievement increases. This, of course, implies that it is not how much time is available for the learning activity but rather the actual amount of time the students are engaged in learning activities that contributes to effectiveness. For example, Ramey, Hillman, and Matthews (1982) state the following:

> ...it appears that high schoolwide reading gains occur when the teacher spends a maximum of classroom time involved in interactive instruction and a minimum amount of classroom time teaching one-to-one, organizing the classroom, and monitoring student work. (p. 10)

Bloom (1974) suggests that time is the central variable in school learn-
ing. In addition, research conducted by Armor (1976), Edmonds (1979),
and others suggests that teachers in effective schools terd to spend less
time in classroom management. This seems to reinforce the idea that more
time spent on academic tasks and less time spent on other non-academic
behaviors, the more positive the correlation with higher achievement
scores.

The assumption being made in conclusions associated with time
on task is that quality instruction and learning are taking place. Hard-
ly anyone would argue that the amount of time spent in study or in learn-
ing a given subject is related to one's level of understanding. More
importantly, however, instruction is assumed to conform with known prin-
ciples associated with effective teaching practice. Given this assump-
tion, the correlation of additional time on task and higher achievement
is positive.

Expectations

There is strong support in the literature for the correlation
between high expectations for the achievement of students and the effec-
tive school environment. Researchers such as Berliner (1979), Edmonds
(1979), and Murnane (1980) find that teachers in effective schools tend
to have higher expectations for student accomplishments than do other
teachers. Rutter et al. (1979) found that the effective school produced
the attitude on the part of teachers that all of their students would
pass exams. Studies by Phi Delta Kappa (1980) and Hoover (1978) embel-
lished this correlation by finding that teachers within the effective
school tend to feel that their students can master basic objectives
through their teaching and expect each student to do so. An important
point to note is made by Brookover (1979), who states that the environ-
ment of the effective school produces high expectations on the part of
the members of the school. Such commonly shared attitudes often are re-
flected by school goals and missions. As noted by Brookover in his study
of secondary schools, the instructional leadership of the effective
school also shares in the high expectations for the students.

Brookover and Rutter et al. describe the attitudes of students as they relate to expectations. It seems possible that such high expectations could intimidate some students and perhaps heighten feelings of inadequacy or anxiety. Researchers find that students generally report a feeling that they have the ability to complete school work successfully. Students in effective schools, however, unlike students in ineffective schools, tend to report that the school allows them the opporunity to succeed.

The concept of high expectations is very important to the concept of the effective school. It may very well be that this variable reflects the level of commitment to teaching and the school. The way in which these expectations are conveyed to students is not clear but it is clear that the high expectations encourage students to achieve.

Some data also indicate that there is particular emphasis on achievement in the basic skills areas. For example, Squires (1980) found that the effective school's instructional leaders tend to emphasize basic skills instruction. Because achievement test results differentiate the effective school from other schools it is not difficult to understand this emphasis.

Success Rate

Research tends to indicate that the higher the success rate of students the greater the correlation with academic achievement increases. Success rate, as it is used here, refers to the percentage of correct responses given by a student during a certain period of time.

There is some contention, however, concerning how much success is enough. Huitt and Seegars (1980), for example, state that the needed success rate depends on the mode of instruction being used. Fisher et al. (1978) defined success rate in terms of the appropriateness of the task for the student performing that task. In their findings these researchers note:

> Common sense suggests that too high a rate of "high
> success" work would be deleterious (boring, repetitive,
> time wasting, etc.) Probably, some balance between
> "high success" and more challenging work is appro-
> priate. (p. 12)

Fisher also notes differences in needed success rate percentages accord-
ing to age and general skill at school learning.

Although Crawford (1975) and Roberts and Smith (1982) state
that the optimal success rate is 75%, the bulk of the research indicates
that the percentage should depend upon the situation. As has been shown
with student learning styles, individual learning differences do exist
between students and are reflected in a variety of ways.

Curriculum Alignment

Curriculum alignment is the term used to refer to the "match"
or alignment of instructional objective(s), instructional activity, and
evaluation. Research by Niedermeyer and Yeben (1981) indicates the rela-
tionship among three things--what is planned, what occurs in the instruc-
tional activity, and the assessment of concepts and skills acquired
through that instruction--is correlated with achievement gains in the
basic skills. For example, the Los Angeles Unified School District
Curriculum Alignment Project has shown consistent achievement score gains
by utilizing the concept of curriculum alignment in developing curricular
materials.

Staff Task Orientation

The effective school environment is one in which staff appear
to be highly task-oriented. Rutter et al. (1979), for example, found
that ending class early was negatively correlated with achievement. In
other words, early class termination was associated with lower test
scores. The same study also found beginning academic lessons on time to
be positively correlated with achievement. As mentioned earlier, events
which take away from the potential time available in which students could
be engaged in learning tasks appear negatively correlated with achieve-
ment. This would seem to be closely linked with the findings in the area

of time-on-task. Medley (1979) reported data which indicated that
teachers within the effective school environment tend to take fewer
breaks. Data in this area indicate that staff approach their profession-
al responsibilities seriously and utilize all available time possible in
academic learning situations with students.

Behavior Management

Research findings consistently indicate that the effective
school environment is characterized by less time spent in the classroom
on behavior management (Armor, 1976; Edmonds, 1979; Cooley and Leinhardt,
1980; Madaus, 1980). The approach to behavior management in the class-
room, however, is the result of school-wide or school district plans
rather than the result of each individual teacher's unique behavioral
management plans (Brookover et al., 1979; Rutter et al., 1979).

In addition the effective school is not one in which high
levels of corporal punishment are routine. Research data indicate that a
high level of corporal or physical punishment is negatively associated
with scores. In other words, as corporal punishment goes up achievement
scores tend to go down and vice versa (Rutter et al., 1979). In fact,
there are some data which suggest that teachers in effective schools tend
to give less criticism to students than do teachers in other schools.

Nonetheless, the teacher and administrator in the effective
school appear to be disciplinarians in that these persons clearly explain
consequences for appropriate and inappropriate behavior to students.
Once these are understood, consequences are consistently applied to stu-
dents (Brophy, 1979). Again, however, these consequences are established
at the school or district level and are mutually agreed upon by staff
within the effective school environment.

School Environment

The effective school environment is described as having an
atmosphere which is pleasant, orderly, quiet, and safe (Weber, 1971).

The atmosphere has also been described as one that is conducive to learning (Edmonds, 1979). Although hardly surprising, research indicates that the effective school maintains an atmosphere which does not distract from learning experiences.

Data indicate that better physical conditions for students correlate with achievement score increases. Better physical conditions studied by Rutter et al. (1979) involved access to telephones, clean and well-kept restrooms, hot drinks, good meals, and freedom to use school buildings as needed.

Cooperation

Research in this area tends to show that teachers cooperate with other teachers as well as instructional leaders in the effective school. As mentioned previously, staff cooperate to devise and implement a school disciplinary policy. Another area of cooperation involves course or curriculum planning. In many cases this is done in smaller (perhaps grade-level) groups. The planning process, however, appears to be significantly influenced by school leaders. Wellisch and others (1978) found that the effective school implements instructional programs that are extremely well coordinated by school leaders.

Although coordinated by school leaders, teachers in the effective school appear definitely to feel a part of this cooperative process. Research data indicate that the effective school environment produces feelings on the part of teachers that their views are represented by those who make decisions (Rutter et al., 1979). In addition, Madden and associates (1976) found that teachers felt "supported" in the effective school. Rutter et al. similarly found there is a feeling of adequate clerical support for teachers in the effective school.

In general, the research points toward a willingness in the effective school for staff to cooperate on tasks while having tasks coordinated by school leaders. Each teacher seems to have a definite sense of contribution to the school while also feeling supported through various resources within the school environment itself.

Instructional Leadership

The term instructional leader is used here primarily to designate the role of the building principal. In some cases, however, instructional supervisors and lead teachers also are included in this category. Generally, the research indicates that the instructional leader in the effective school has strong views and is very active in the observation and coordination of academic work within the school.

The effective school instructional leader is characterized in several ways. This leader tends to feel strongly about instruction and has a definite point of view which is promoted (Wellisch et al., 1978). Edmonds (1979) points out that the leader is a strong administrator who demonstrates strong leadership in a mix of managerial and instructional skills.

Austin (1979) found that the instructional leader in the effective school more frequently reported a feeling of control over the functioning of the school, the curriculum, and the program staff. Brookover and associates (1979) found leaders in this setting to be more accepting of teacher accountability. Kean (1979) found that the instructional leader tends to have more frequent classroom observations than others. Information also indicates that the instructional leader is more of a disciplinarian and is better able to resolve conflicts than the leader in the less effective school (Hall and Alford, 1976).

Research has also pointed toward some rather specific behaviors which further clarify the role and attitude of the instructional leader. The leader of the effective school tends to assume more responsibility for the achievement of basic skills by students (Brookover et al., 1979). In addition, this leader tends to have developed and communicated a plan for dealing with basic skills achievement problems (Edmonds, 1979).

The effective school instructional leader also appears to be actively involved in teaching within the classroom. Kean (1979) reports that the instructional leader in the effective school participates more in the classroom instructional program and in actual teaching within the classroom. Brookover and others reinforce this by finding that the instructional leader tends to assume more responsibility for teaching basic skills such as reading and for achievement within these areas. Further, it has been shown that the instructional leader tends to set instructional strategies and tends to have developed schoolwide procedures for instructional strategies in specific areas (Sweeney, 1982; Shoemaker and Fraser, 1981). Rutter and associates (1979) found the instructional leader in the effective school participating more actively in the selection of resources and in the planning and organization of curricula. In addition, these researchers found that the instructional leader is aware of specific teacher patterns, for example, checking to see that teachers give homework to students. The effective school instructional leader evidently does not "socially promote" students. Recent research indicates that the effective school instructional leader does not promote students who fail to meet "required" performance levels (Squires, 1980; Wayne, 1981).

The instructional leader, then, appears to be highly involved in the work of teachers and the achievement of students. The leader also tends to regularly discuss and review teaching performance (Wellisch et al., 1978). Generally, strong managerial and instructional skills are demonstrated by the institutional leader in the effective school.

Recently, however, studies in the area of instructional leadership have been questioned. Rowan and others (1982) have critiqued the methodology of instructional leadership studies as well as the definition of school effectiveness itself. These authors feel the role of the instructional leader may not be as closely linked to the effective school as found in some research.

Parent Participation

The involvement of parents in the school generally appears to be closely related to achievement in the effective school. In work done for the Alaska Department of Education, Cotton and Savard (1980) sum up their review of 50 studies in this area in the following manner:

> Overall, the studies found that parent participation has a positive effect on children's achievement, and the more extensive the participation, the more positive the results. These findings emerged from studies of both preschool and elementary children; with a variety of academic achievement measures; in rural and urban settings; and with disadvantaged, special education and regular education students. Several studies cited positive outcomes other than achievement gains, including improved self-concept of parents and children, improved school-community relations and better student work habits. (p. 4)

Brookover and associates (1977) in their study of Michigan elementary schools found parent involvement to be negatively correlated with students' basic skill achievement in middle-class white schools and positively correlated in black schools. This suggests that student characteristics, if controlled for, might influence the effect of parent participation in the educational process. It is also important to note that the nature of parents' contacts and involvement with schools appears to be related to ethnicity, income level, and effectiveness of the school.

Instructional Practice

There is a great quantity of information which deals with instructional practice within the effective school. Some research investigations have referred to investigation in this area as "classroom improvement" or "classroom management" studies. Problems arise in analyzing this research as a part of effective school research because effective school research deals with the total school environment while classroom improvement studies quite often deal with only one part of the environment. Nevertheless, because effective classrooms are part of the effective school, some major findings are cited below.

Effective school research indicates that teachers in effective school settings tend to interact with the class as a whole more than do other teachers (Ramey et al., 1982; Medley, 1979). Work by Stallings (1982) indicates this is done at least 50% of the classroom time available. While this finding implies that less time is spent in small group and individualized efforts, it does not imply that such activities do not occur. In fact, Stallings found these to occur no less than 35% of the available classroom time. As stated previously, however, assumptions seem to have been made by researchers concerning quality of instruction. Quantity of time considerations are meaningless if a level of quality in the educational process is not maintained.

In addition to the above, there is considerable evidence that the effective school environment promotes monitoring of student performance more than other school environments (Berliner, 1979; Medley, 1979). Conclusions about monitoring of student performance are reinforced by the findings of Armor and associates (1976) who found higher levels of teacher-student contact in the effective school environment. There are, however, some studies which have not found monitoring of student performance and progress to be particularly different between "effective" and "ineffective" school settings (Ramey et al., 1982).

There are also data available which indicate that the frequency and quality of feedback given to students is associated with success in learning and achievement (Bloom, 1974; Berliner, 1979; Cohen, 1981). Further, data suggest that the immediacy of the feedback given by the teacher to the student is positively associated with the student outcome of achievement.

Direct instruction is a process which has been found to be positively correlated with achievement. The major aspects of direct instruction are academic focus, teacher-centered focus, little student choice of activity, large group instruction, factual questions, and controlled practice. While positively correlated with achievement, some researchers such as Good and Grouws (1979) find that direct instruction,

although positively correlated with achievement, does not produce the creativity, problem solving ability, positive school/teacher attitudes, independence, and curiosity on the part of students as do other processes such as open classrooms. Good and Grouws suggest that student characteristics should enter into the consideration of instructional method used. Indeed, students who are naturally high achievers may not need and could be adversely affected by direct instruction.

Conclusion

This paper has cited major aspects of school effectiveness research. It should be noted, however, that the research deals with "indicators" of the effective school environment. These indicators, for the most part, do not address many of the process variables which would seem to be equally important to the achievement of students. Process variables as used here describe the way in which an event or characteristic is brought about or demonstrated. For example, common school goals or missions oriented toward student achievement are general characteristics of the effective school. Lack of information concerning the process variables associated with this characteristic disallows the establishment of cause-and-effect inferences and the advantages of diverse approaches.

Some critics argue that school effectiveness research has displaced the goal of the educational process. Achievement test scores, it has been said, do not measure the quality of functioning of the student either in the total school environment or after graduation. By using achievement scores as the measure of school effectiveness, it is assumed that some of the necessary skills and abilities related to later functioning are being measured; achievement test scores have displaced the goal of successful functioning after graduation.

It also seems reasonable to argue that school effectiveness research, to this point, has enumerated factors that accompany or indicate the effective school environment. These factors or indicators need further clarification and development in order to derive needed informa-

tion concerning the processes by which the effective school is established and maintained in a variety of circumstances.

While it is possible to infer that certain characteristics as stated in this paper can produce a more effective school environment, the process has not been systematically studied in the literature. While much has been learned to refute the conclusion of the 1966 Coleman Report that schools do not make a difference, much remains to study and learn before many serious questions in this area can be answered definitively.

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*For a discussion of the differences in groups of references see Synthesis Framework, pages 1-2.

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