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ABSTRACT

Equity in education first meant equal access to schools; in the early 20th Century it came to mean access to schools supported by equal resources; and more recently it has come to mean access to schools providing equally effective educational processes. Assertions that student achievement is affected more strongly by external factors than by education have led to research on effective schools. Among the variables found to affect student achievement have been school leadership, student body composition, emphasis on academics, classroom and time management, parental involvement, and staff development. These variables relate more closely to educational processes than to resources, suggesting that equality of access to processes is a significant concern. In less developed countries the effects of the variables affecting achievement are considerably modified by budgetary limitations and cultural differences, but the variables significant in developed countries also tend to be significant in less developed countries. The school effectiveness findings suggest that school level efforts to provide processes appropriate to the population should not be hampered by government policies aimed at equalizing resources, implementing change, or developing the staff. The research also suggests that improvements should be made in preparing administrators for effective school leadership. Seventy-six references are cited. (PGD)

ACHIEVING EQUITY AND EFFECTIVENESS IN SCHOOLING

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The theme for this 6th international intervisitation programme, "Equity and Diversity: Challenges for Educational Administrators," affords many inviting opportunities for one whose primary area of academic interest is the economics and financing of education. Achieving greater equity through equalization of educational opportunities has dominated the thinking of scholars in educational finance since the first "scribbler," to use Bailey's (1962) term, took up his pen. Although it is tempting to devote this entire paper to the concept of equity and its operational implications, I will simply outline the development of thinking concerning equality of educational opportunity as it relates to school finance. Then I will turn to the research on effective schools and interpret the implications of that body of literature for educational equity and school operation. Lastly, I will discuss how these ideas may affect professional practice in the field of educational policy and administration and the preparation of educational administrators.

Educational Finance and Educational Equity

Concepts of equity as they apply to financing education have been discussed by several writers, including Alexander (1982), Berne and Stiefel (1984) and Nwabuogu (1984). Noting the differences in the treatment of equity by various philosophers, Alexander pointed out that "what is equitable depends to a great extent on the orientation of both the dispensers and receivers of equity." (1982, p. 194). Of particular interest to educators is distributive equity, that is, conditions created by the deliberate redistribution of benefits by governments. Issues of distributive equity underlie the questions about equality of educational opportunity that so frequently arise in discussing the arrangements for financing public schools. One's philosophical convictions, of course, condition one's view of the extent to which remedial action by a government is justified. Hayek (1976), for example, maintained that the concern for distributive equity is satisfied if the government does not grant benefits in unequal proportions to certain persons to the detriment of others. Thus, Hayek opined that affirmative action to achieve equity is not required unless the conditions leading to inequity were created by the government. Rawls (1977), on the other hand, maintained that the government should intervene actively to secure a distribution of goods which operates to the advantage of those least favored. According to Rawls, any disadvantage, whether or not it is the result of governmental action, should be mitigated by the state. Clearly, implications for public policy regarding financing education are quite different if one accepts Rawls' view than if one accepts Hayek's view.

Equality of educational opportunity has been accepted as a normative goal of educational policy in the United States since colonial times (Butts and Cremin, 1953). It has proven to be as elusive, however, as the proverbial pot of gold at the end of the rainbow. By virtually any standard, there has been a great deal of progress made toward achieving equality of educational opportunity in the United States since 1790, but few will argue that it has been accomplished. Initially, equality of educational opportunity was defined in terms of access to the common school. The goal of early efforts to achieve equality of opportunity was to establish and extend the educational system so that all children would

have free access to elementary schooling, and eventually, to afford all children free access to secondary schooling.

By the beginning of the 20th century, equal opportunity for access to schooling (at least for "normal" children) was generally available but a new definition of equality of educational opportunity began to emerge. Either explicit or implicit in the writings of Cubberley (1906), Updegraff, (1922), Strayer and Haig (1923) and Morrison (1930) is a concern for equality of educational opportunity, which gradually came to be understood in terms of access to an educational program that would satisfy at least minimum standards. Typically, the minimum satisfactory program was defined in terms of resource inputs measured in dollars. The foundation program, district power equalizing and full state funding approaches to financing education in the several states each are concerned with guaranteeing sufficient spendable dollars to provide at least a basic educational program to every child.

No clear lines of demarcation exist between these two operational definitions of educational equity. For example, securing access to educational programs has been a continuing concern of handicapped, disadvantaged and minority students, and there is continuing debate about the level of resources required to provide an adequate minimum education to all students. Much time and effort have been devoted to securing "fiscally neutral" state school finance systems and to securing additional funds for handicapped or disadvantaged students who require more costly educational programs.

Recently we have witnessed the emergence of what Murphy and Hallinger (1986) term "third generation equity issues."
The third generation equity issues are characterized by a focus on educational processes rather than being concerned exclusively with educational inputs. Equality of educational opportunity is viewed in terms of the use of school time, the quality of teaching, course content, classroom grouping practices, etc. In this approach to educational equity, knowledge about how curricular and instructional resources are distributed to different students is the basis for assessing equality of access to learning within schools and classrooms.

Some educational reformers argue that equality of educational opportunity must be defined operationally as equality of outcomes. Equality of outcomes is a feasible standard, however, only if the education production function can be specified with precision. One cannot guarantee attainment of a specified educational outcome unless one can describe in detail the combination of resources and processes required to produce that outcome. Research to date indicates there are many education production functions, i.e., the most efficient and effective combination of resources to produce a given outcome will be a function of the specific student as well as many situational variables (Rossmiller, 1986). The complexity of the educational process, and our lack of knowledge concerning precise relationships between inputs, processes and outputs, demonstrate that it is not yet feasible to define equality of educational opportunity in terms of equality of outcomes for individual students.

The third generation of educational equity issues had its origins in the Coleman Report (1966), and particularly the report's conclusion that schools apparently exercise little influence on the achievement of children independently of social and family background factors. Many educators were unwilling to accept this conclusion and mounted research

efforts to demonstrate that the quantity and quality of schooling do make a difference in student outcomes, and that student achievement is not determined solely by the student's social and family background. These various research efforts have yielded a body of literature generally referred to as research on effective schools.

Effective Schools and Educational Equity*

Two distinct lines of research are discernible in the literature on school effects. One line of research is characterized by quantitative studies using multivariate statistical analysis; the other takes a more qualitative approach to the quest for school effectiveness. Much of the research on the outcomes of schooling has focused on cognitive knowledge as measured by standardized achievement tests. Thus, effective schools have been defined primarily in terms of gains in cognitive knowledge rather than by broader, more inclusive, measures of the outcomes of schooling.

The research on effective schools is not without methodological problems. Among them are: (1) the failure to control for confounding variables such as student socioeconomic status, (2) an over reliance on case studies, (3) the use of cross-sectional rather than longitudinal designs, (4) the comparison of extreme outliers, and (5) the lack of generalizability, particularly to secondary schools. Despite these methodological problems, Rosenholtz (1985) found at least three reasons to regard the findings of the effective schools research as much more than spurious:

> "First, several studies describe 'turnaround' schools that, because of changes in organizational conditions, became more successful. Second, even when controlling for random error, analysts find that organizational characteristics account for 32 percent of between-school variance in student achievement. Third, effective schools research has been conducted within a relatively compressed time frame, not building serially from one study to the next; yet all studies produce common findings with remarkable consistency (p. 353)."

The literature reveals a limited set of characteristics that seem to be present consistently in effective schools. Mackenzie (1983) identified three dimensions of effective schools--leadership, efficacy, and efficiency--together with core elements and facilitating elements within each of the three dimensions. Core elements within the leadership dimension included positive climate and overall atmosphere, goal-focused activities, teacher-directed classroom management and decision making, and in-service staff development for effective teaching. The facilitating elements within the leadership dimension included shared

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*This section draws heavily from Cohn, E. and Rossmiller, R. A. (1985). Research on effective schools: Implications for less-developed countries. A paper prepared for the Education and Training Department of the World Bank.

consensus on values and goals, long-range planning and coordination, stability and continuity of key staff, and district-level support for school improvement.

Edmonds (1982) identified five characteristics of an effective school: (1) a principal who provides leadership and gives attention to the quality of instruction; (2) a pervasive and broadly understood instructional focus; (3) an orderly, safe climate conducive to teaching and learning; (4) teacher behaviors that convey the expectation that all students will obtain at least minimum mastery of a subject; and (5) the use of measures of pupil achievement as the basis for program evaluation.

One of the most comprehensive reviews of the literature on school effectiveness was published by Purkey and Smith (1983). They grouped the studies of school effectiveness into four categories--outlier studies, case studies, program evaluation studies and "other" studies--and used information derived from these various studies to describe the components of an effective school using two groups of variables. The first group is comprised of organizational and structural variables; the second is comprised of process variables. In their view, the first group of variables can be established by administrative and bureaucratic means, but the second group is related to the climate and culture of the school and cannot be put in place by edict or through bureacratic manipulations.

The nine organization/structure variables identified by Purkey and Smith as characteristic of effective schools are:

1. Emphasis is placed on school site management, with considerable autonomy given the school leadership and staff.
2. Strong instructional leadership is provided by the school principal, other administrators, or teachers (although they observed the principal is uniquely positioned to fill this role and the principal's support is essential).
3. Stability and continuity are valued and actions which decrease staff stability are avoided, thus facilitating agreement and cohesion.
4. Curriculum articulation and organization are used to achieve agreement on goals, develop a purposeful program of instruction coordinated across grade levels, and provide sufficient time for instruction.
5. There is a school-wide staff development program based on the expressed needs of teachers, involving the entire school staff and closely related to the school's instruction program.
6. Parents are informed about and supportive of school goals and student responsibilities, especially with regard to homework.
7. School-wide recognition of academic success is provided, thereby encouraging students to adopt similar norms and values.
8. Time is used effectively with more time devoted to academic subjects and less time lost to disruptions or non-academic activities.
9. Support from the school district is evident (because, while change must occur at the building level, it is not likely to happen without support and encouragement from the central office).

The four process variables identified by Purkey and Smith relate to the culture and climate within the school:

1. Collaborative planning and collegial relationships are evident and help break down barriers, develop consensus and promote a sense of unity.
2. There is a strong sense of community; a feeling that one is a member of a recognizable and supportive community reduces alienation and increases commitment to school goals.

3. Clear goals and high expectations, including clearly defined purposes and agreement on priorities, are evident.
4. Order and discipline are based on clear rules that are enforced fairly and consistently and help communicate a sense of the seriousness and purpose with which the school approaches its task.

Purkey and Smith emphasized that the organization/structure variables and the process variables are interrelated and interdependent. The organization/structure variables provide a framework within which the process variables can be developed. Neither group of variables, of itself, is sufficient to describe an effective school in their view.

A preponderance of the research on effective schools has been conducted in elementary schools. Research currently underway at the Center on Effective Secondary Schools at the University of Wisconsin-Madison is designed to advance knowledge concerning factors and processes that shape secondary education and thus lead to effective secondary schools. The Center is one of several university-based research centers funded by the United States Department of Education as a result of a competition conducted in 1985. Work is being conducted in five program areas--academic achievement, higher order thinking, at-risk students, staff working conditions, and school change. I am collaborating with Professor Mary Metz in a study of the ways in which the work environment in secondary schools tends to enhance teacher engagement and commitment, and to determine the extent to which these conditions can deliberately be altered at the school site. During the 1986-87 school year, we will observe and interview teachers and administrators in a small sample of urban and suburban secondary schools. Concurrent with the field research, we are analyzing selected data from the National High School and Beyond survey to identify variables and factors related to teacher commitment and engagement as perceived by secondary school teachers and principals.

The results of school-effectiveness research in other developed countries is generally consistent with the findings of the studies conducted in the United States. Probably the best-known study is that of Rutter, et. al. (1979), which investigated the effect of a wide range of school characteristics on the scholastic achievement of students in 12 London secondary schools. The results suggested that childrens' behavior, academic emphasis of the school, use of rewards and incentives, teachers' lesson preparation, student responsibility, student intellectual ability and the leadership ability of the headmaster all had a positive affect on achievement.

A study by Stevenson (1983) compared school achievement in reading and mathematics in the United States, Taiwan and Japan. The results reported by Stevenson are quite consistent with the overall conclusions derived from American school effectiveness studies in regard to time on-task, classroom management, homework, general use of student time, and parental attitudes, beliefs and involvement.

School Characteristics and School Effectiveness

There is evidence that a number of variables do affect student achievement. Among them are school leadership, composition of the school's student body, academic emphasis within the school and classroom, classroom management and discipline, use of time in school and the home environment of the student. Most of these variables relate much more to

the way in which resources are used--the processes of the school and classroom--than to the level of resources per se, thus lending support to the view that adequate resources are necessary, but not sufficient, to insure increased student achievement, and also lending support to the credence of the third generation equity issues.

School Leadership

Many researchers have concluded that leadership is necessary to initiate and maintain the school improvement process (Armor et al., 1976; Berman & McLaughlin, 1977; Brookover & Lezotte, 1979; Mann & Inman, 1984; New York State Department of Education, 1974; Venezky & Winfield, 1979). Although leadership need not be restricted to the school principal, Glasman (1984) has noted that the essence of the term "school leadership" centers on the principal. Rosenholtz (1955), described principals of effective schools as having:

> "...a unitary mission of improved student learning, and their actions convey certainty that the goal can be attained. Such actions include recruiting outstanding teachers who have goals similar to their own and to those of other staff, organizationally buffering teachers to ensure that their efforts are devoted to raising student achievement, monitoring the academic progress teachers make, supplying additional technical assistance to needy teachers, and providing--mostly in concert with teaching colleagues--the opportunities to establish strategies to achieve instructional goals (p. 354)."

Glasman and Biniaminov (1981) found, however, that in none of the input-output studies have attributes of school principals been used as input variables. Thus, while there is general agreement that leadership at the school level is a key component of effective schools, it is nevertheless a fact that researchers have not yet traced the linkages between attributes of school principals and the achievement of students in their schools (see also DeBevoise, 1984, and Eberts & Stone, 1985).

Student Body Composition

There is evidence that, ceteris paribus, student achievement is somewhat lower in schools that have a high percentage of minority, socially disadvantaged, or intellectually disadvantaged students (Brookover et al., 1979; Coleman et al., 1966; Jencks et al., 1972; Klitgaard & Hall, 1975; Summers & Wolfe, 1977; Glasman & Biniaminov, 1981; Murnane, 1981). It must be noted, however, that caution is required when interpreting the relationship between student body composition and student achievement because schools in which there is a high percentage of disadvantaged children frequently differ from other schools in a number of ways, some of which also are likely to affect student achievement.

Academic Emphasis

The results of many studies support the view that student achievement is higher in schools and classrooms where there is a clear focus on academic goals, appropriately structured learning activities, a teaching method which focuses on the learning task to be accomplished and

an expectation of high achievement by students (Armor et al., 1976; Brookover et al., 1979; Brophy, 1979; Good, 1979; Glenn, 1981; Mann & Inman, 1984; New York State Department of Education, 1976; Venezky & Winfield, 1979; Weber, 1971). Student achievement is higher when teachers agree on goals and objectives and expect students to achieve them.

There also is evidence that student achievement is enhanced when academic success is honored publicly and stressed through the use of symbols, ceremonies and other public recognition (Brookover et al., 1979; Brookover & Lezotte, 1979; Coleman et al., 1981; Wynne, 1980). One must caution that, while effective schools emphasize high standards of academic achievement, they also adopt multiple strategies to deal with the particular needs of individual students. The concept of the school as a place for learning is communicated clearly to students and a commitment to learning is expected in every classroom.

Classroom Management

There is abundant evidence that student achievement is influenced strongly by the way in which teachers manage their classrooms. Effective teachers gain and hold the attention of students and maintain a classroom environment conducive to learning. They select modes and techniques of instruction appropriate to the learning objectives to be attained, and to the learning styles of the students. The atmosphere is orderly and discipline is maintained. Clear and reasonable rules of conduct are enforced consistently and fairly, lessons begin and end on time, and students know what is expected of them, receive timely feedback on their performance and are praised for good performance (Armor et al., 1976; Coleman et al. 1982; Edmonds, 1979; Glenn, 1981; New York State Department of Education, 1976; Venezky & Winfield, 1979; Weber, 1971).

Management of Time

In effective schools a larger percentage of the school day is devoted to academic subjects, students spend more time in learning activities and class periods are free from interruptions (Brookover et al., 1979; Fisher et al., 1980; Stallings, 1981). Whether the analysis has been done at a macro level (Wiley & Harnischfeger, 1974; Harnischfeger & Wiley, 1976), or the school and classroom level (Peterson & Walberg, 1979; Karweit, 1982; Rossmiller, 1983; Kiesling, 1984), the time spent on-task in learning activities is associated positively with student achievement measures, and the relationship is stronger for low-achieving students than for high-achieving students (Rossmiller, 1983).

Parental Involvement

Several researchers have found parental involvement and support to be an important factor in student achievement (Armor et al., 1976; Brookover & Lazotte, Levine & Stark, 1981; Phi Delta Kappa, 1980). Although schools cannot control the student's home environment, activities designed to involve parents in school activities and enlist their support for these activities are likely to exert a positive influence on student achievement. Although it is possible that "involved" parents seek out more effective schools (i.e., there may be a

self-selection problem), the weight of the evidence suggests that more involved parents tend to foster greater achievement motivation in their children, especially if the parents help children with home work--or at least encourage children to do it (Stevenson, 1983; Rossmiller, 1986).

Staff Development

School-wide staff development programs that are closely related to the school's instructional program and based on the needs of teachers identified through a process of collaborative planning are characteristic of effective schools (Armor et al., 1976, California State Department of Education, 1980; Glenn, 1981; Venezky & Winfield, 1979). Although the educational literature stresses the importance of continuing in-service development programs for teachers, few studies examining the intermediate and long-term effects of such programs have been conducted. The results of an intensive staff development program for Australian educational administrators reported by Silver and Moyle (1984) offer encouragement with regard to the efficacy of such programs.

School Effectiveness in Less-Developed Countries

There seem to be great similarities in the determinants of academic performance in both developed and developing countries. Two distinct differences between developed and less-developed countries must be noted. First, expenditures on education in the less-developed countries are a small fraction of those in the western industrialized countries. Thus, it might be expected that investment in textbooks and materials would have a significant affect on achievement, as has been demonstrated in several studies (Heyneman & Jamison, 1980-Uganda; Heyneman, Jamison & Montenegro, 1984-Philippines; Jamison, et. al., 1981 - Niguarua; Neumann & Cunningham, 1982 - Mexico; and Schiefelbein, et. al., 1983 - Chili). As Psacharopoulos and Woodhall (1985) point out, however, the efficacy of textbook purchases diminishes after the ratio of books per pupil approaches 1:2 and, furthermore, textbooks must be complimented by appropriately trained teachers and curriculum. In a reanalysis of IEA data, Heyneman and Loxley (1982) concluded that a larger number of school-related variables appear to influence achievement in less-developed countries than had been reported earlier, yet variables such as "budget for science equipment," "budget for school maintenance" and "annual budget (non-teaching salary)" were rarely significant for less developed countries.

A second major difference between developed countries and less-developed countries is the cultural factor. To the extent that cultural differences come into play in the educational arena, what's good for a developed country may not be good for a less-developed country. It also should be noted that there is considerable variation in cultural factors in the less-developed countries, implying that findings for the Philippines, for instance, may not be relevant for Kenya. Nevertheless, studies for the less-developed countries generally confirm results cited earlier for developed countries concerning the impact of such factors as good classroom management (Arriagada, 1983 - Peru), time on-task (Heyneman and Loxley, 1983 - India, Thailand, Iran and Chili), homework (Heyneman and Loxley, 1983 - Thailand and Iran), and hours of instruction (Heyneman and Loxley, 1983 - India, Thailand and Iran).

Simmons and Alexander (1978), in a review of research on production functions in less developed countries, concluded that essentially the same variables that are found to be significant (or nonsignificant) for developed countries also appear to be significant (or nonsignificant) in less-developed countries. They do point out, however, that textbooks, teacher motivation and homework appear to have a significant effect on achievement in less-developed countries.

The cumulative evidence on school effectiveness in less-developed countries, as summarized by Eicher (1984), Moock & Horn (1983), Psacharopoulos and Woodhall (1985), Solmon (1985) and Stromquist (1982) suggests that school resources do matter, among which one can identify, in particular, textbooks (up to a point), radio and other instruments of distance education, and inservice training for teachers. Class size is not consistently related to student performance (Haddad, 1978), nor have researchers found a consistent relationship between budgetary outlays and student achievement. Still, school resources (as a unit) appear to exert a significant impact on achievement, indicating that wise use of resources in less-developed countries should promote educational improvement. With the exception of textbooks, distance education and perhaps teacher training, there is no reason to believe that the factors affecting student performance in less-developed countries differ in a fundamental sense from those found for developed countries.

Implications of Research on Effective Schools for Educational Policy

The research dealing with effective schools dovetails neatly with the emerging third generation educational equity issues, which are concerned with variables within the control of policymakers and practitioners and with the educational process in schools and classrooms. The literature on school effectiveness emphasizes the school and classroom as the locus of educational activity, and the importance of school climate and process variables in the educational attainment of students. The evolving definition of educational equity and the literature dealing with effective schools both have important implications for the development of educational policy and the practice of educational administration.

As discussed earlier, the Coleman Report (1966), and other studies which obtained similar results, challenged the conventional view that spending more money on schools would result in scholastic improvement. However, more recent research in both developed and developing countries suggests that substantial improvement can be achieved by judicious allocation of funds to and within schools. Merely "throwing money at schools" may not improve school effectivenenss, but carefully selected programs may have substantial effects. Moreover, although the central government may play an important role in educational finance and educational planning, most of the variables that affect student performance depend on actions by personnel at the individual school level. This does not mean that rules, regulations and requirements established by the central government or the school district are not necessary. It does imply that such actions must be considered carefully to ensure that they do not impede or preclude potentially productive actions at the school and classroom level.

School Expenditures and School Effectiveness

While the research on effective schools provides no assurance that spending more money will result in more effective schools, neither does it establish that school expenditures are of no importance. It is quite clear that whether or not spending more money will improve school effectiveness depends primarily upon how the additional funds are used; that is, money is a necessary but not a sufficient requisite to more effective schools. Some schools are simply more effective than other schools even though they spend about the same average amount per student and serve comparable students. When the funding level is sufficiently high, as it generally is in the United States, schools might be able to achieve their objectives without additional funds, provided that they are aware of resource allocation strategies which could improve output (Cohn, et al, 1980; Wolfe, 1976). But technical information and expertise of this sort often is not available to local schools, which points to an area where the central government could provide needed assistance through carefully planned and targeted research and development activities.

The research to date provides no definitive answer to the question, "At what level of spending do marginal returns turn down?" This question is of great importance in less-developed countries, where expenditure per pupil is typically much lower than in the developed countries from which much of the effective schools research has emanated. Adequate facilities, equipment, books and other instructional materials are necessary if a school is to be effective, but it is evident that fine facilities and abundant materials alone will not ensure school effectiveness. The research provides no basis for concluding that less-developed countries should reduce their level of expenditure for education. The findings do suggest that at some level, as yet undetermined but apparently reached in developed countries, attention must increasingly turn to how resources are used in the educational process.

The School as a Unit

The uniqueness of the individual school as a social system must be recognized and respected when formulating educational policy and planning for its implementation. While national/state policy regarding education is essential, it is at the individual school and classroom level that learning occurs. National/state policies can establish the parameters within which the individual school operates, but they cannot control the teaching/learning climate in an individual school or classroom.

The research also draws attention to the importance of the decision-making process within the school. School principals and teachers must make day-to-day and even minute-to-minute decisions concerning how best to use the resources available to stimulate, encourage and reward the learning of students. It is important that national/state policies concerning education establish appropriate parameters for school and classroom decisions, but also provide sufficient leeway for those decisions that can only be made effectively at the school and classroom level.

Changing Schools

The research on effective schools spotlights the futility of relying on a top-down strategy to change what happens in schools and classrooms. There is ample evidence that no matter how well planned, systematic attempts to intervene in schools rarely are successful (Berman and McLaughlin, 1977). Weick (1976) has described schools as "loosely coupled" systems with only weak linkages between the administrative level and the classroom, particularly in secondary schools. If Weick's notions are correct, it is obvious that significant change in schools is unlikely to be accomplished by fiat. Rather, if one wishes to change schools, it is necessary to change the norms, behaviors and attitudes of those who comprise the school organization. Viewed thus, any school improvement strategy must concentrate on achieving staff consensus on norms and goals, and this cannot be achieved with a top-down approach.

Staffing Schools

The task of recruiting, preparing and retaining competent principals and teachers should receive a great deal of attention, and this is particularly true in less-developed countries. The research on effective schools emphasizes the importance of decisions made by principals and teachers, and also serves to underline the importance of pedagogical skills. Skill in classroom management as reflected in maximizing the time devoted to academic instruction, maintaining order and discipline, establishing clear goals and objectives, etc. is a distinguishing characteristic of effective schools. It is quite clear that merely developing a cadre of competent bureaucrats at the national/state level will not ensure that individual schools will be effective. It is necessary to attract competent individuals to careers in teaching and administration, provide them with appropriate training to develop their knowledge base and leadership skill, and create conditions necessary to retain in the schools. Both monetary factors (for example, salaries and opportunities for advancement) and nonmonetary factors (status, esteem and respect) appear to be important.

A program of school-wide staff development is characteristic of effective schools. While the content and substance of such programs undoubtedly are important, the process used in planning and implementing staff development programs may be even more important. Staff development programs that are designed at the national/state level without extensive involvement of those for whom they are intended are very likely to miss the mark. The planning, design and implementation of such programs should occur at the school level within parameters established by national/state policies which provide maximum leeway to meet varying local needs and conditions. In the final analysis, the success of the best-laid plans of national/state policymakers will depend on how effectively they are implemented in the local schools.

Other Strategies

Evidence from both developed and less-developed countries suggests that how (and how much) time is used for both in-school and out-of-school learning may be important. For example, more time on-task and a greater amount of homework assigned to students is practically costless, yet may pay handsome dividends.

Since a smaller class size has not been shown to invariably result in higher student achievement--in fact, some studies show that students perform better in a larger class (e.g., Kiesling, 1984)--it might be better to increase class size in some instances and use the extra funds to purchase textbooks or other instructional or noninstructional materials, particularly when such resources are in short supply. Since resource inputs are generally subject to diminishing marginal returns, the trade-off between class size and other inputs must proceed very cautiously and student achievement should be carefully monitored during such an experiment.

Although the results for less-developed countries are not conclusive, evidence from the Perry study in Ypsilanti, Michigan, indicates that pre-school programs may help children from low socioeconomic status families to perform on a par with their more privileged peers (Gramlich, 1986). The benefits, moreover, appear to accumulate over the years, providing a sizeable return on the investment. Preschool programs might, therefore, provide benefits from both the efficiency and equity viewpoints.

Implications for Administrator Preparation

The research on effective schools calls our attention to the importance of the individual school. The era dominated by the notion that "bigger is better" in American education may be ending. No longer is it assumed that economies of scale in education are unlimited, and that larger units are always to be preferred. Although it may overstate the case to claim that "small is beautiful," there is renewed attention to the importance of leadership at the school level.

The research on effective schools particularly calls attention to the important role played by the school principal. Principals of effective schools are able to weld together a team characterized by unity of purpose and a commitment to goals. While school principals will continue to need the specific technical skills related to their job, it is becoming increasingly evident that they also need highly developed "people skills". Principals will need to have a great deal of knowledge and sophistication if they are to work effectively with the school staff and community to build mutual understanding and commitment to goals. Furthermore, the principalship must be viewed as an appropriate career position, not merely a way station on the way to positions in the central administrative hierarchy.

The recent spate of reports calling attention to problems in American schools and proposing solutions for them also have important implications for preparation programs in educational administration. Among the problems universally cited is that of securing and retaining enough competent teachers to staff the schools. Among the recommended solutions are adding an additional year of preparation (from 4 to 5 years), providing a much more carefully planned and monitored induction to professional practice, paying higher salaries, developing more clearly delineated career opportunities in teaching, and expanding the teacher's job to provide more opportunities to assume leadership responsibility (Holmes Group, 1986; Task Force on Teaching as a Profession, 1986).

Many of the changes being recommended to make teaching a more attractive profession have important implications for the role of the school principal and for other school administrators. The report of the Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession commented as follows with regard to school leadership and the role of the principal:

> "No organization can function well without strong and effective leadership and schools are no exception. But the single model for leadership found in most schools is better suited to business or government than to the function of education. The model of a non-teaching principal as head of the school can work in support of the collegial style of schooling we propose, but there are many other models that should be tried. Among them are schools headed by the Lead Teachers acting as a committee, one of whom acts like a managing partner in a professional partnership. In such schools, the teachers might hire the administrators, rather than the other way around. Once the fundamental idea that the primary source of expertise for improving schools lies within them, many ways to organize for leadership are possible (1986, p. 61)."

Recognizing the need to carefully review, thoughtfully revise, and systematically strengthen preparation programs for school administrators, the University Council for Educational Administration (UCEA) took the leadership in empanelling a National Commission on Excellence in Educational Administration. The Commission is chaired by Dr. Daniel Griffiths and its membership is broadly representative of the professoriate, practicing school administrators at the local and state level, administrators in higher education, political leaders and interested citizens. Although the final report of the commission will not be issued until late in 1986, it is likely that the commission will recommend substantial and significant changes in the selection and preparation of school administrators. The induction to professional practice of prospective school administrators will receive particular attention, for it is clear that a much closer working relationship between administrator preparation programs and the field of professional practice is needed. Carefully crafted preparation programs including both rigorous academic work and well-designed field experiences under the guidance of a skillful mentor are required if we are to prepare administrators with the knowledge, skills and leadership qualities required for effective schools.

This is an exciting time in the field of educational administration. New definitions of equality of educational opportunity are emerging. The importance of the individual school and classroom is again being recognized. And most important, there is general agreement that if we are to have effective schools, we must have effective school leaders.

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