DOCUMENT RESUME

ED 182 226 SO 012 325

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TITLE The Compatibility of Goals in the Public Schools: Equality, Competence, and Excellence.
PUB DATE Sep 79
NOTE 41p.; Paper presented at the Annual Meeting of the American Sociological Association (74th, Boston, MA, September, 1979).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; *Academic Aptitude; Economic Disadvantagement; Educational Finance; *Educational Objectives; *Educational Philosophy; Educational Practice; *Educational Research; Elementary Secondary Education; *Equal Education; Literature Reviews; Nondiscriminatory Education; Public Education; School Role; Socioeconomic Influences; Speeches; Student Characteristics

ABSTRACT

Compatibility of three basic goals of public education in the United States is examined. The goals are: (1) equal educational opportunity, interpreted as giving the same education to all students regardless of factors such as race and parental wealth; (2) general competence, defined as attainment of basic academic skills by the great preponderance of graduates; and (3) excellence, interpreted as achievement of academic potential. Consideration of the compatibility of these goals is undertaken within a framework of subthemes identified by educational researchers as major areas of concern. These include determining costs and benefits of steps schools might take to reduce inequality, diagnosing and dealing with special student capacities, financing remedial and/or gifted student programs, allocating materials and teachers, and grouping students according to ability. Review of existing educational research literature indicates that although researchers have produced much data on academic achievement, school role, and socioeconomic influences on education, they have generally not related their conclusions to goal compatibility. The conclusion is that researchers will contribute more to an understanding of goal compatibility if they design research linking an intensive case study approach with general analysis of data regarding objectives, achievement, and resource allocation from many types of schools. (DB)

The Compatibility of Goals in the Public Schools:

Equality, Competence, and Excellence

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This paper has benefited greatly from the critiques offered by Steven Bossert, William Bridges, Stephen Warner, Jeffrey Davidson, Mary Metz, Kay Troost, Ginnie Hiday, Joel Rosch, and anonymous reviewers.

Presented at the 74th Annual Meeting of the American Sociological Association, Boston, September, 1979.

The Compatibility of Goals in the Public Schools: Equality, Competence, and Excellence

by
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Abstract

This paper examines the compatibility of three goals of public education: equality of educational opportunity, general academic competence, and excellence in students of special capacities. The argument that the goals are incompatible derives largely from the claim that comprehensive education dilutes achievement by spreading resources thinly and lowering standards. This argument deserves evaluation but is overly simple. One cannot assume that resources produce the greatest achievement gains when expended on those who have succeeded in the past. Similarly, one cannot assume that standards must be lowered to keep likely dropouts in school or to raise their achievement.

Woven throughout the consideration of the compatibility of the three goals are several important sub-themes: (1) Schools may reduce inequality best by helping disadvantaged students with special capacities to excel in school; (2) assuring a general level of competence may require a narrower focus for school activities than the production of excellence; and (3) tremendous variation within schools in individual achievement gains may be due to the differential allocation of materials, teachers, and students, for example in ability grouping.

After examining the three goals and exploring their compatibility, the paper suggests two lines of research to investigate the issues raised.

Significant criticism of public education in the United States focuses on: (1) the failure of the educational system to make opportunities equally available to children regardless of their / race, socio-economic status, ethnic background or sex; (2) deficiencies in the general competence and levels of performance of students graduating from the education system, which frequently are characterized as quite inadequate; and (3) difficulties the schools have in encouraging exceptional performance, especially among students who are disadvantaged by race and socio-economic status. Critics react to announced goals of equality of opportunity, general competence in achievement, and excellence in the achievement of students of special capacities. Some critics argue that these goals operate at cross-purposes and are, therefore, contradictory. This paper examines the bases for such an argument and its limits. The purpose is, in part, to discover conditions and policies under which the goals are compatible.

Part of the argument that the three goals are incompatible is based on the assumptions that financial resources, usually spent on more and better personnel, plant, and materials, influence the product forthcoming from the educational system, that such resources are limited, and that, therefore, the distribution of resources influences the distribution of quality in the product. Put more

succinctly, it is assumed, following the British critique, that mass education dilutes the quality of student achievement. While we are unwilling to make all of these assumptions our own, preferring to explore them further empirically, we do accept the premise that resources are limited. This limitation leads us to a focus on the question, in what parts of the educational system and for what kinds of students are increments in resources likely to give rise to maximum benefits? Given the pessimistic view of "school effects" following the Coleman Report, discoveries that there are measurable returns from the application of resources to the education of certain groups of students are important both for continuing research in this field and for policy makers faced with limited funds. Recently, the collection of more appropriate data than those used in the Coleman Report has led to such findings. We hope to contribute to this new thrust by generating more systematic theory than has often been used in school effects research.

The paper first examines the three basic goals for public education in America. Second, it explores the compatibility of these goals. Finally, it suggests two lines of research to investigate the issues raised in the paper.

Multiple Goals in American Education

Equal Opportunity

The multiplicity of goals held for education in America reflects the multiplicity of demands placed on the schools by various interests. Some of these demands have been interpreted to be in the public interest, as well. One set of demands is furthered insofar as all children have access to the educational system. An example is the schools' large role, with which they have been properly credited, in assimilating masses of immigrants to the United States in the late nineteenth and early twentieth centuries. This role included language and citizenship training and socialization to the needs for discipline and order (Lazerson, 1971; Durnin, 1974). Bowles and Gintis (Bowles, 1973; Bowles and Gintis, 1976) see this type of socialization as especially relevant to the training of an obedient and malleable industrial work force. This type of training continues today but no longer involves so much the socialization of immigrants. Dreeben (1968), speaking of socialization in general, expands attention beyond socialization for obedience at work. In answer to the question "what is learned in school?", he points to norms of far-reaching importance for economic and political life in our kind of industrial society, including the balance between independence and cooperation and between universalism and specificity.

While these types of socialization depend on the teaching of skills or the inculcation of attitudes, Jencks and his colleagues (1972) suggest that what one learns in school, especially as measured by achievement tests, has surprisingly little impact on subsequent job performance. Rather, they argue, a central function of the

educational system is to make access to desirable jobs dependent on a willingness to remain in school for many years. This view resembles Bowles and Gintis' argument, as only those students who have shown their willingness to obey authorities and withstand boredom are rewarded with desired jobs. Moreover, because many students do not stay through enough years in school to qualify for top jobs, the occupational structure is spared an unmanageable demand for these top positions. In this way, the educational system enhances the stability of the occupational structure while at the same time "cooling out" students of considerable talent unable to comply with authority and to forego other opportunities when the program at school is not challenging or is even boring. In Jencks' pessimistic argument, schools would be less successful at reducing the demand for top jobs if they were more challenging to more students.

More generally, schools better prepare students for a life of obedience in the economy and polity when students are passive and uncritical than when they are creative and acute. However, we ought not be surprised that students are noisier and more disobedient in recent years than they used to be. Such pedagogical innovations as the "new math" and open classrooms encourage exploration and questioning in students -- producing quite a different classroom tone than that described by Bowles and Gintis or Jencks. These innovations seem to be at the expense of training obedient workers.

So far, the argument has been that by giving all children access to education, various interests in society are served. The wide distribution of access to education may, in addition, serve the students themselves. Here we are speaking not of the intrinsic value of learning (both hard to estimate and wrong to underestimate), but of the effect schooling may have on later life chances, such as opportunities for prestigious jobs and for a good income. The context of this discussion must be the confused discussion of equal educational opportunity; more specifically, does equal educational opportunity counteract the stratifying influence of background factors, such as race and parental wealth. An answer can be structured by Mosteller and Moynihan's distinction (1972:6-7) between inputs to education and outcomes of education. For our purposes, this distinction means we should consider two senses in which distributing education equally may counteract inequality in income and job prestige. First, giving the same education to all students and second, equalizing their educational achievements may reduce such inequality. Equal educational opportunity in the first sense requires an equal distribution of educational resources to all children. In the second sense, it may require a compensatory distribution. Equality of outcomes encompasses the goal of assuring minimal competence in all students.

It is important to distinguish further between inequality in income and job status due to ascribed characteristics, such as race and parental status, and that due to differences in the achievements of the student. In the former case, we are referring to "the inheritance" of inequality (see Duncan, 1969); in the latter, we are speaking of the meritocratic aspects of stratification (see Young, 1958).

While it is the ascriptive sources of inequality which have usually been considered the insidious ones in our society, equalitarians would argue against inequality per se (Jencks et al., 1972).

What are the extent of inequality in education and its effects on inequality in income and job status?' Annual school expenditures per student vary greatly, but variation by race and family income is relatively small. Because white and non-poor children stay in school considerably longer, however, total expenditures per student substantially favor these children. (We are relying here and below on Jencks et al., 1972.)

If expenditures are inputs into a child's education, what are outputs of that education? One is the set of skills measured on achievement tests or "cognitive skills." Blacks score somewhat lower on these tests than do whites. Children of poor parents score lower than do children of richer parents. Additional educational expenditures have not been shown substantially or consistently to reduce inequality in cognitive skills. The same can be said of efforts to improve cognitive skills by changing the organization of schools, as by changing class size. A second outcome of education is a diploma, or more generally a number of years of schooling. Blacks stay in school fewer years than whites, children with poor parents fewer years than children of non-poor parents. The black-white difference in years of schooling is statistically explained by the difference in cognitive skills. Indeed, controlling for cognitive skills, black children aspire to more schooling than white children do. The poor

non-poor difference is due to the lower test scores and fewer financial resources of the poor, but even more to attitudes or tastes that put less emphasis on education. Students who attend high schools with ample resources tend to stay in school slightly longer than students who attend less well supported schools, but the difference is entirely accounted for by differences in the students' economic backgrounds, test scores, and initial educational aspirations. According to most studies, then, differences in annual educational expenditures per student have little effect on inequalities in cognitive skills and the length of time students remain in school. The resources public money can buy as inputs to formal education seem to have little impact on outcomes from schools. These conclusions are based on aggregate studies of variation across schools. They require further assessment at the individual level of variation across students.

What are the effects of educational outcomes on inequality in income and occupational status? Cognitive skills have only a small effect on income differentials but some of these persist after controls for family background and years in school are introduced. The effect of cognitive skills on occupational status appears somewhat larger, but disappears almost entirely with these controls. Thus, <u>if</u> schools could have an equalizing effect on people's cognitive skills, presumably by boosting the test scores of black and poor children, income would be equalized more than occupational status, but the change would still be small.

People who stay in school longer and get higher diplomas earn more, their higher incomes deriving from access to more highly paid occupations. The relationship of years of schooling and occupational status is a strong one, even net of family background and cognitive skills. This means that getting more schooling is a good strategy twoard upward mobility for individual poor or black children. It does not imply, however, that raising or equalizing years of education generally attained would raise or equalize the distribution of occupational status. Inequality in educational attainment serves as a somewhat arbitrary criterion for allocating access to jobs. The inequality, not the education makes such attainment a useful allocation criterion. Beyond minimal levels of competence, the importance of formal education for actual job skills is questionable (Jencks et al., 1972:227). If educational attainments were equalized, the allocation of the scarce resource of prestigious and highly paid jobs would have to be based on a different criterion.

Schools, then, cannot be expected to produce outcomes which will generally reduce inequality in the way society distributes money and jobs (Bowles and Gintis, 1976; Jencks et al., 1972). The instrumental importance of equalizing educational outcomes should not be overestimated. As an end in itself, however, equality of educational outcomes may be highly valued. From this point of view the generally pessimistic findings about effects of school resources on school outcomes are disturbing. We will note here two methodological critiques of these pessimistic findings.

Bowles and Levin (1968) have argued that school effects appear so small in the Coleman Report (Coleman et al., 1966), because the statistic used considers only the unique effect of school after the effect of socio-economic status has already been considered. Since school resources and SES do covary, the Coleman Report's statistical approach provides good description of the school effects in our society as we know it. Bowles and Levin's criticism suggests, however, that the effects of schools might be greater if the attributes of schools did not covary with SES. As a matter of social policy, efforts in this direction could be arranged. Specifically, it is worth learning what the effects of additional school resources and innovative modes of school organization are when applied to parts of the student population which have not usually been exposed to them. Such schools, while rare, can be sought out and investigated.

A second reservation about the generally pessimistic findings of the school effects literature concerns the unit of analysis usually employed. It is probably true that the average effect of a school on its students is not great. The effect of the school on certain of its students, however, may be substantial. For example, school may provide the intellectual structure and social stimulation that children who are handicapped mentally, emotionally, or physically may not get if they are raised outside of schools but which are required if these children are to progress. Poor or black children who remain in school, perhaps because of something the school does, may have access to better jobs than they could otherwise expect. College preparatory curricula may increase the aspirations for college and the rate of admission to

college of poor or black students who enter with high test scores. School may counteract the social messages girls often get that high achievement in math and science detracts from femininity and is to be avoided. One cannot discover these kinds of school effects by looking at data aggregated at the school level. It would not be enough, however, to use individual level data. The school effects on the individual are invisible unless the appropriate school programs and the appropriate groups of children are examined. Some individual level studies of school effects are beginning to be reported. (See the review in Murnane, 1975. Key studies besides that of Murnane include Summers and Wolfe, 1975 and Hanushek, 1972.)

One set of demands on public education in American society depends on the wide distribution of educational opportunity. These opportunities can be conceived of as access to educational resources or as cognitive and credential outputs from education. Most of the benefit from a wide distribution in either sense accrues to others besides the individual student, for example by the preparation and channeling of the work force. Some of those benefits rest on equal outcomes (e.g., norm acquisition), others on differentiating outcomes (e.g., years of schooling). Beneficial net effects of schooling on students may yet be located empirically but their discovery depends on different research strategies than have usually been pursued.

General Competence

The second goal is to assure the competence of the great preponderance of graduates. There is growing disquiet with the general level of

academic achievement in the schools. This disquiet in part lies behind movements to sacrifice what are seen by some as "frills" (e.g., electives, sports) for a reemphasis on "the basics" and to adhere strictly to minimum standards of achievement. Some principals and school systems have announced an unwillingness to promote students who are not performing at grade level. Some states demand of their high school graduates that they display competence in a set of skills, academic and otherwise, thought necessary to allow adult participation in our society. Ironically, a national study group has recommended against basing high school diplomas on such competence criteria more generally. Their fear is that the criteria would have to be set embarrassingly low to allow a large number of graduates. An effort to give meaning to credentials threatens the wide distribution of credentials.

One might argue that generally increasing the achievement levels of graduates of the public schools is important in order to increase the productivity of the work force. This probably oversimplifies the relationship of education and labor productivity for our economy (see Berg, 1970; Collins, 1971; Bowles and Gintis, 1976; Dore, 1976). It is not clear that most employers depend on the schools to do more than equip would-be employees with basic skills. Much of the training for many jobs takes place on the job rather than in the classroom (Doeringer and Piore, 1971). Indeed many jobs involve skills which cannot be transferred outside the firm or industry. (World wide, over the full range of education levels, it is probably fair to say that the more educated the labor force, the more productive it is (Harbison and Myers, 1964).) Yet in the United States, much of the labor force

already possesses credentials promising skills considerably greater than needed for the available jobs. This is consistent with the idea that education serves the function of regulating demand for high status jobs. As this demand increases, credential requirements are inflated to decrease the demand. Still, employers complain of the poor basic skill levels of these highly credentialed employees. Employers, thus, come to believe that students who receive credentials from our schools do not have the competence those credentials promise. While employers now demand higher and higher credentials for the same job, the lesson that those credentials cannot be relied on as measures of competence may lead them to devalue educational credentials per se in hiring and to rely instead on testing or recommendations. Competence prepares graduates for work and citizenship, certainly, but it also insures institutional security for the educational establishment.

Excellence

The third set of interests is served by schools when they produce excellence in some of their students. While by definition far fewer students can excel than can achieve competently, students may excel in a number of areas, including academics, art, athletics, and leadership. Schools may help produce excellence by developing talents students bring to school. This contrasts with imparting general competence in areas the school decides are important. We are not prepared to assume that excellence is produced by schools through special expenditures or programs. It is possible that those with special capacities realize their talents to a greater extent in certain school situations than in others, but

it is also possible that such students generally achieve close to the level of their potential whatever their school setting. It is conceivable that schools could cause a larger group of students to achieve at levels substantially above minimum levels of competence but this upgrading of achievement may be as elusive as many other enhanced outcomes of education. "Good schools" may, therefore, facilitate the production of excellence, or they may simply avoid stifling talent.

One further distinction about educational excellence concerns whether its impact on society derives from the excellent achievement of the individual or from the grouping of talented students in prestigious schools or selective programs. The social impact of educational excellence can be explained from both points of view. One perspective, perhaps too naively, sees power and privilege being earned by the meritorious. The other, perhaps too cynically, sees these as the private domain of a self-perpetuating elite.

We can identify three general social effects of excellence in the education of some students. First, leaders in some of the institutional sectors of our society come from the pool of those who excelled in school. This is especially true of sectors in which schooling is important both in developing skills and developing a reputation. For example, journalists who attend highly selective colleges earn considerably more than do journalists with training at colleges of only average or low selectivity (Johnstone et al., 1976). A moderate effect persists after controls for achievement on the job (e.g., prominence of news organization and number of editorial employees supervised) are introduced. In part,

excellence is more a matter of reputation than fact, and elite high schools, prep schools, and elite colleges may provide leaders mainly by building or perpetuating social networks among their students (Domhoff, 1967). Thus, Long finds the productivity and frequency of citation of biochemists to be a moderately strong function of the prestige of the departments in which the biochemist studied and worked (1978). However, the ultimate accomplishment is frequently also a consequence of the quality of work and of unstifled energies to achieve. For scientists, Cole and Cole (1973:90-121) show that the rewards of their fields (e.g., honorific awards, familiarity to colleagues, prestige of academic appointment) are a function of quality of work and not of the prestige of the institution granting the Ph.D. (Seeming contradictions between the Long and Cole and Cole studies may be due to design differences. The causal ordering of productivity and rewards can only be ascertained with a longitudinal design, such as that used by Long (1978).)

A second effect of excellence in education is to engender change, both in society and in the fund of knowledge. With regard to advancing knowledge, work may be judged highly because its creator received his training at an elite institution, because the work is excellent, or because the work was excellent and was done by someone who attended an elite institution. Consistent with the earlier data cited from their study of scientists, Cole and Cole (1973:101) found that judgments of the quality of a scientist's work had a relatively low relationship to the prestige of the institution granting the Ph.D. Again, Long (1978) argues, in contrast, that these judgments are affected by the prestige of mentors, collaborators, and institutional affiliations.

Excellent schooling while providing leaders for the social order may also stimulate change. For example, the student activism of the 1960's was spawned at elite universities and only later spread more widely (Flacks, 1971). This pattern must be explained in spite of the economic interests most students at elite schools have in the maintenance of the status quo. Part of the reason may be that they have more economic freedom and can afford to concentrate on social and political activism even if career interests are postponed as the result. (Without individual-level data on the social class background of activists of these elite schools, these explanations may be ecologically fallacious.) Moreover, elite colleges and universities may have norms of greater openness, facilitating activism. In addition, and more the product of excellent schooling, such students may have gained the perceptual and conceptual tools with which to question the pronouncements of governments and other authorities. More generally, good training and high perceptual and conceptual aptitude may facilitate distinguishing between the ideal and the real, suggesting the need for change. The gap between the ideal and the real may be especially disturbing to upper-middle class students because their socialization has led them to believe ideals are realizeable, while working class students may have grown up with a more cynical perception of ideals. When upper middle class students are bright and well trained these factors would reinforce one another.

A third effect of excellent schooling is to offer a path for upward mobility to students who have special capacities but who are disadvantaged by their race or class background. While much of the occupational structure

does not allocate its positions according to academic excellence and talent, graduate and professional schools, key pathways to the upper reaches of the occupational structure, do recognize such excellence as a criterion for admission. Grade-point average, class rank, and test scores are used to evaluate applicants. School may well be more important in realizing the aspirations of disadvantaged students for high status positions than for white and middle class students. For the latter, family and peers provide academic training and support, but not for the disadvantaged student. He relies more completely on the school. According to this logic, extra resources need to be focused on disadvantaged students who show promise of excelling so that their aspirations are not thwarted.

Formal education responds to varied claims with three different programmatic goals: spreading access to education widely if not equally; educating as many students as possible to at least minimum levels of competence; and producing or facilitating an excellent education for students with special capacities. The relationships of education to the rest of the social order are complex. We have seen that the stability of the occupational structure depends on the schools, but that education seems not to have a great equalizing effect on the inequality that is reproduced by the occupational structure. In addition, change in a social order resistant to change comes via the efforts of some of the best products of the educational system. Further insight into the relationship between these goals of education depends on investigating the possibilities for pursuing more than one of the three educational goals simultaneously. Are these goals contradictory or reinforcing?

The Three Goals: When Compatible? When Incompatible?

Equal Opportunity and General Competence

As discussed earlier, the wide distribution of educational opportunity can be understood in two senses: giving children equal access to educational resources and giving children equal educations. Put slightly differently, this is the difference between encouraging attendance in children who have not attended school before, for example, truants or children of migrant workers, and improving the performance of low achievers and likely dropouts. What is the expected effect of pursuing policies for wide distribution in these two senses on the average competence of school children?

Bringing to school children whom the social structure has discouraged from attending before can be expected to lower the average level of achievement. These new entrants are likely to be from economically disadvantaged families. Since economic status is positively related to test scores (Jencks et al., 1972:78, estimate the correlation at .35), general achievement levels will tend to decrease as education is made more widely available. The same logic traces the decline in College Entrance Examination Board scores to the increasing range in socio-economic status of students taking these tests. It is much less clear that the achievement of students already enrolled would be adversely affected.

Nor is it clear that overall levels of competence would decline if efforts were made to upgrade the cognitive skills of those who measure very low in this area or to keep likely dropouts in school longer. The

issue is the difference in achievement gains resulting from spending both financial and organizational resources on different types of students. Since resources are limited, a decision to spend on one type of student is also a decision to spend less on another type of student. General competence, measured either by average achievement or by the proportion achieving at minimal standards in a school or district will continue to go up as long as the gain of those on whom new resources are spent exceeds the loss of those from whom resources must be taken. The compatibility of the two goals becomes, thus, the question "On whom are resources best spent?" If the return is greater for those already achieving fairly well, shifting resources to poor achievers will decrease the general level of competence at the school. On the other hand, if the return is greater for those who are not achieving well, overall achievement levels will rise as resources are focused on the poorer achievers.

This neat formulation in terms of pareto optimality is made more complex when one also considers differences in return to these students at different levels of expenditure. Is there a threshold of resources for a type of student, lower than which the return is minimal? Above this level, does the return accelerate or tail off rapidly? Does a rule of diminishing marginal productivity prevail? If so, spending on those who have received less while taking from those who have received more should (all else equal) increase the average level of achievement.

Empirical evaluations of the return to particular resources expended at certain levels on certain groups of students can be made. This depends on the use of individual-level data. Summers and Wolfe (1975:10-12) show, for example, that large classes in junior high schools

affect low-income students more adversely than other students. They also find that in elementary school experienced teachers help high-achieving students most, while less experienced teachers help low-achieving students most.

So far, we have looked at the relationship between raising the cognitive achievement of low-achievers and the general level of competence. Now let us turn to the relationship of that general level of competence and efforts to keep students in school longer, especially those who tend to drop out early. If we can assume that students of whom less is expected will achieve at a lower level (Mitchell, 1977:26; Rist, 1970; Clark, 1965), strategies to maintain attendance by lowering expectations should lead to reduced achievement levels overall. Promoting students because they grow older, often called "social promotion," rather than because they achieve at minimum standards, is one way in which expectations are probably reduced. Curricular changes are another. A report of recent observations by one of the authors will illustrate: In one Chicago suburban district undergoing racial change, fewer than 50% of the students now read at the level prescribed as adequate for their grade. A new social studies curriculum is being developed. The curriculum director of the district has instructed the teachers who are writing the new curriculum to rely on student activities which do not involve reading, such as audio-visual and comic strip materials. The teachers see two advantages to this new approach: first, students will be better motivated to study the materials; second, students who read poorly will not have their self-images damaged by the experience of failure. For our purposes,

both reasons for studying social studies without reading are useful for keeping children in school, especially poor achievers. Low school expectations and standards for reading skills, however, are confirmed by the new curriculum.

Let us turn the argument around and ask the effect on the distribution of educational opportunity of assuring basic levels of competence. While we reasoned earlier that bringing students into the schools who had really not particiapted before would depress the average level of competence, a program to assure minimum competence cannot conversely be assumed to discourage such students from coming to school. A "back-to-basics" program aimed at minimal levels of competence should have no effect on renewed efforts to enforce truancy laws. Indeed, parents who did not become involved in the education of their truant children when "new math" and the "discovery method" were stressed may respond more favorably to a basic skills curriculum (Sieber and Wilder, 1967). On the other hand, if the cost of raising most students' achievement to minimum standards is high (i.e., return to the resources expended on them is low), few resources will be left for efforts to upgrade the skills of very low achievers and gaining the interest of truants. Finally, boosting the general level of achievement may require that teacher expectations be raised. This may discourage or stimulate more marginal students.

Equal Opportunity and Excellence

Educational excellence for students of special capacities assumes inequality of educational achievement. While this goal is logically independent of efforts to assure general competence in students, it is

only compatible with broad or equal distribution goals which do not attempt to equalize educational achievement. Trying to make educational resources available to students who have been denied them in the past is, therefore, not incompatible in theory with producing excellence in students of high ability. Here, limits on financial resources are not a large issue. Programs to encourage excellence in a rather small group of students do not consume tremendous sums, although they may consume other resources such as administrative commitment, the best teachers, and parental good will (if parents oppose what they see as "elitist" programs).

Programs to keep likely dropouts in school longer may or may not discourage excellence. Where the program takes the form of lowering expectations school-wide, students of high ability may be affected as much as any other students. Moreover they would need to cope with the resulting role conflict. For example, where academic achievement is devalued, peer pressure may discourage able students from trying to excel for fear of appearing "bookish." On the other hand, programs to keep likely dropouts in school need not discourage excellence. Such programs as vocational education cater to the aspirations of some students who find academic work difficult or unsatisfying but do not detract from commitments of other students to try hard in academic subjects. The mechanism may be the physical segregation of ability groups that accompanies special interest curricula. This arrangement may cater to the interests of low achievers and likely dropouts, while simultaneously grouping high achievers together in an academically ambitious curriculum.

Another way to approach this problem is by expanding the idea of excellence beyond traditional academic definitions. The occupational world rewards many other personal attributes besides intellectual development; therefore, one can ask whether schools need to maintain this narrow definition of excellence? Schools operating under a broader definition aim to help students find their strengths and excel in these. There is, of course, a danger of reducing the focus of academic achievement under such an educational philosophy. While a school operating under this philosophy would help its academically talented students to excel, the general level of academic competence might fall. In one school with such goals, reading scores were generally substandard, but teachers, administrators, and the community were very satisfied with the positive orientation of the students to the school, manifested through their efforts in non-academic programs (Leiter, 1977).

Finally, let us look at the compatibility of efforts to produce excellence and to upgrade the cognitive skills of low achievers. Again, since programs for producing excellence in small numbers of students do not consume very much money, the main issue is organizational arrangements, key among them being ability grouping.

Before examining logical and empirical considerations, some of the polemics of the question must be addressed. Michael Young in his futurist satire, The Rise of the Meritocracy, pictures ability grouping as a part of a larger social order in which inequality is based on intellectual or technical ability (1958). By replacing inequality based on birth with inequality based on merit, society's work is done more effectively. People who criticize ability grouping for diminishing

efforts to eliminate inequality are probably right. If ability grouping helps those of great talent to excel, their paths are smoothed to high prestige jobs in some of which academic excellence is important. However, people who criticize ability grouping for reinforcing existing inequality may not be correct. Schools have the potential for decreasing the inheritance of social status. The correlations between cognitive ability and ascriptive characteristics, such as race, parental education, and class, are far from perfect. Talented but disadvantaged students can be some of the chief beneficiaries of ability grouping and other meritocratic programs. Unfortunately, it is no doubt harder to overcome nonmeritocratic inequality in the adult's world of power and pay than in the student's world of ability groups.

From the point of view of the disadvantaged and talented student, then, ability grouping has the advantage of selecting on his merit rather than on his birth. This is likely to help him excel in school and may even help him get a better job. From the point of view of the student with less talent academically, especially when he is disadvantaged by birth, ability grouping may be much less desirable. If teachers reduce their expectations for student performance to match the low ability group, if schools allocate poorer teachers and materials to poorer students, and if students adopt the image of their worths and futures signalled by their placement in a low ability group, then achievement may well drop below the level it would have reached in an ungrouped setting. Moreover, low achievers grouped together do not profit by the example or the assistance of high achievers. Many teachers argue, to the contrary, that ability grouping helps all students because it allows the tailoring

of the materials and the pedagogical method to the ability of the students. Students at the extremes of ability are especially helped because in ungrouped classrooms, teachers "teach to the middle," above the heads of the slowest students and below the capacities of the brighter students.

Passow (1966) and Boocock (1972) characterize empirical research about the effects of ability grouping on achievement as inconclusive. A chief difficulty is that the effect of grouping is often confounded with the consequences of class and race. Some of the assignment of middle class and white students to higher ability groups is probably not based on merit. In a study less troubled by this methodological problem, Goldberg et al. (1966) found that, except for the most gifted, students gained the most in classes that were not grouped by ability. The sample in this study underrepresented schools with substantial poor and non-white populations, so the possible inferences are limited. Rosenbaum's (1976) case study of a working class high school also isolated the effects of placement in different ability groups from those of class and race. Students in college tracks tend to make IQ gains while those in noncollege tracks tend to register IQ losses. This study, like that of Goldberg, suggests that grouping is of questionable benefit to low achievers. Alexander et al. (1978) take great care to estimate grouping effects net of the impact of family background or previous educational achievements and attitudes. Unique grouping effects favoring able students were significant for math achievement but not for verbal achievement. (They found much stronger effects on educational aspirations.) This study seems not to have differentiated students who were not grouped from students who were grouped in non-"academic" curricula.

A related grouping possibility is the concentration of high or low ability students in a single school. The effects of the ability mix in the entire school have been investigated by Summers and Wolfe with data from the Philadelphia Public Schools (1975). Few of their schools had more than ten percent high achievers, but about half had more than fifty percent low achievers. Thus, their study is at the other end of the socio-economic and ability spectrum from that of Goldberg and her colleagues. In the Philadelphia study, elementary school students achieving at or below grade levels were "distinctly helped" by going to a school with relatively many high-achievers. For students achieving above grade level, there was little effect. Similarly, going to a school with many low-achievers did not hurt the performance of high achieving elementary graders, but did prejudice the performance of low achievers. In junior high school, all students benefited from attendance at a school with relatively many high achievers, while attendance at a school with many lower achievers had little effect on either high or low achievers.

Dahllöf (1971) takes note of the previous wisdom that ability grouping has inconsistent effects, but he questions this conclusion for methodological and theoretical reasons. He argues that grouping studies rarely attempt to analyze the curricular and pedagogical processes through which the effect may be transmitted. In his own study, Dahllöf finds that high ability groups spend more time on advanced topics and less on elementary ones. Assuming this to be widely the case, he explains the failure to find achievement differences in many grouped settings by achievement measures that do not adequately cover the advanced areas.

What the studies by both Goldberg et al. (1965) and Summers and Wolfe (1975) lack, despite their methodological sophistication, is a theoretical orientation to which their findings speak. Post hoc explanations are suggestive, but the evaluation of theoretical propositions is far preferrable. To this end, Boocock suggests accounting for the effects of ability grouping by the individual characteristics of the students, reference group behavior, and teacher behavior (1972:161). Sorensen organizes explanations of the differential effects of ability grouping on achievement in terms of teaching, other teacher behavior, student attitudes and aspirations, and the allocation of instructional resources (1978:36). Dahllöf, by analyzing curricular differences among ability groups, provides an example of the insights available from such greater theoretical rigor.

Incompatibility between the production of excellence, academic and otherwise, and the wide distribution of education is far from certain. Programs which attempt to equalize achievement are likaly to reduce the number of students who excel, but other efforts to make education available to more students or to upgrade the achievement of those who have performed poorly in the past need not have this effect. Special note should be taken of the potential that the production of excellence has for reducing the nonmeritocratic aspects of inequality in our society.

General Competence and Excellence

Most of the questions on which the compatibility of this final pair of goals rests can be inferred from the previous discussion. First, will

a stress on meritocratic inequality, seemingly needed to produce excellence, make it more difficult to undertake the stiffening of standards and the expenditure of resources necessary to assure an adequate general level of achievement? Probably not. The case for assuring adequate general achievement is that without it a diploma will earn nothing in the occupational world. A diploma promises minimal competence, however, only if those who grant it also deny it to those whose merit is insufficient. Both the goals of general competence and excellence are based on distinguishing students according to merit.

Will raising standards and emphasizing achievement in basic areas in order to assure general competence discourage students with special talents from excelling? This is harder to predict. A stress on achievement should not hurt the production of excellence, unless the minimum standards become more than floors for achievement. If students come to think of their task as merely studying enough to pass the competency test, then the supports for doing much better than the minimum are diminished. This means that schools will have to avoid creating a qualitative difference between adequate and excellent achievement. If a student feels he must be a genius and give up everything but school in order to join the group that excels, how many will try? Schools need, therefore, to avoid re-creating within their walls any division between the "elite" and the "hoi polloi." Being rewarded by the system can be something other than an all or nothing affair. What, however, are the implications of ability grouping for a continuum of meritocratic inequality? Does this effort to raise achievement create the expectation among students who are not placed in the high achieving

group that their dreams of achieving well in school and entering a prestigious occupation are low? Rosenbaum (1976) suggests that such low track students mistakenly hold on to expectations of success.

There is one other way in which a stress on minimum standards may hurt efforts to produce excellence. Excellence comes in many forms, including academic, social, artistic, manual, and athletic excellence. Schools that produce the most excellence will be schools which facilitate the development of whatever gifts students bring to school with them. Assuring general competence, however, imposes a societal definition on students. It probably means adequate skills in reading, writing, and computation. Because of this difference, schools which stress bringing the student body up to minimum standards may contract the spectrum of areas in which students will try to excel and receive support for so doing. The definition of competence may reduce the facilitation of excellence.

Research Agendas

School Effects at Two Levels of Analysis

These theoretical considerations suggest two lines of empirical research. The first rests within the tradition of school effects research. Such studies typically examine the impact on student achievement of various school programs and characteristics net of student background and ability. We would conceptualize student achievement in terms of the three goals. Thus, the analysis would attempt to learn what kinds of school programs and personnel increase the general level of competence, help students of spacial talents to excel, and boost the performance of

previously disadvantaged students by keeping them in school longer and by improving their cognitive skills. Moreover, we would examine the impact on each outcome of varying success in the other two, along with the effects of the previously explored school and background variables. These analyses aim to answer the general questions, how successful are the schools in pursuing the three goals and how compatible is the pursuit of each goal with the pursuit of the others.

The three outcomes operate at both the aggregate level of the school and the individual level of the student. The meanings of the three outcomes at these two levels, however, are distinct. At the school level, these outcomes represent the production of a social institution. At the individual level, they represent the achievements of students. Bidwell and Kasarda (1977) argue that these distinct meanings demand different conceptualizations and data analyses. Production at the school level should be conceptualized as an input-output matter. Raw materials, including student bodies characterized by general levels of initial endowment, past achievement, and family background are mixed in a "black box" with school personnel and material resources to produce outcomes, in our case competence, equality, and excellence. At the level of individual achievement, in contrast, we must pay attention to processes inside the school. We must do this not only because they are interesting but also because schools differentially allocate resources to students of different types and because students of different types make different uses of these resources. Only by attending to the processes can we properly specify a model with which to portray student achievement. For example, to account for the achievement of Ms. Smith's student, Johnny, we need

to measure the impact of Ms. Smith's training on Johnny's achievement, rather than simply that of the average training of the teachers at Johnny's school. We could obtain unbiased estimates of the effect of teachers' training on individual student achievement with the average teacher's training only if schools allocated teachers to students randomly. Since many schools allocate teachers and their other resources to students in part with regard to the characteristics of the students, we must measure the impact of teachers' training on students in terms of the teachers to whom students are individually exposed, rather than the average across all teachers at the school.

Bidwell and Kasarda argue that in contrast to much past practice, both independent and dependent variables must be analyzed at the level appropriate to the conceptualization. Aggregate data must be used to model the school as a production unit, individual level data to model individual achievement. They show with simulated analyses that failure to keep the levels distinct results in tremendous inaccuracy in estimates. Specifically, the effects of independent variables measured at the wrong level are substantially underestimated. Hannan, Freeman, and Meyer (1976) caution, however, that the omission of inputs correlated with school-level predictors leads to overestimation of school effects especially when the dependent variable is grouped. Special care must, therefore, be taken to specify school-level models as fully as possible.

Analyses at both levels are worth undertaking. When talking about the societal needs the schools serve, the school level is indicated. When talking about the implications of schooling for students, the individual level is indicated. In the pursuit of both sets of issues, it will be essential to follow Bidwell and Kasarda's advice to keep the levels conceptually and empirically distinct.

Goals as Outcomes of Organizational Processes

Research on the compatibility of the three goals in the tradition of school effects studies would take the goals themselves as given, not in themselves issues for analysis. It would focus instead on the extent of success in achieving the goals. In another train of research growing out of concern for these goals, the goals themselves become the object of the research. Such research would consider as problematic both the setting of the goals and their implementation.

If the first research program focuses on the production of educational outcomes, this program focuses on organizational processes. Consistent with the conceptualization of organizational functions suggested by Parsons (1956) and Thompson (1967), this research into the generation and implementation of school goals could distinguish processes at three levels: the institutional, managerial, and technical levels. These levels can be pictured as concentric rings by which the core activities of the school, those at the technical level, are separated from the school's environment by, successively, the managerial and institutional levels. The research would address processes operating in two directions. First, goals set in part by the school's environment impinge on the school and influence practice at the technical core. Second, practices at the technical core are idealized by their presentation to the environment as goals. This legitimates school practices and, thereby, aids in the ongoing acquisition of resources the environment dispenses, including money, students, jobs for graduates, support, and "benign neglect."

Actors at the institutional level are those most in contact with the school's environment of parents, employers, officials, unions and courts.

These actors are the school board and members, the superintendent and central office staff, and, in some instances, building principals. At this level, the research would explore environmental efforts to influence or dictate school goals, as by legislating state-wide competency testing, and school system efforts favorably to represent present or desired practices, as by generating and presenting data about school successes (or hiding data about shortcomings).

Actors at the managerial level include the superintendent and building administrators. They bring practice in line with goals by directing teachers and students, collecting information about classroom practice, coordinating activities, selecting staff members and allocating teachers, students, rooms, and materials to one another (including such nonrandom allocations as ability grouping). These actors also idealize school practices, especially in problem areas, for example, by creating a special reading program to employ an ineffectual tenured teacher and defending it as needed remediation.

At the technical core, the actors are teachers. Teachers both respond to goals set outside their domain and initiate goal setting activity, themselves. Key to both is their response to managerial control, some mix of compliance, active resistance, and obliviousness. This response is often indicated by the way the teacher organizes instruction: how extensive is the individualization of instruction; in what ways are students grouped within the classroom; what proportion of classroom time is diverted from instructional to disciplinary, administrative, or leisure activities.

These two research agendas are related. Findings about goal complementarity from the first program may be best explained by insights about goal generation and implementation from the second. The data requirements of the two research thrusts are rather different, however. School effects research, at both levels of analysis, requires data from enough schools to distinguish the impact of student, classroom, and school variables. The inquiry into organizational processes, on the other hand, would seem to require intensive case study data. Linking the two types of data is desirable for the exploratory study called for by immature theory in the areas. A carefully specified research design is, therefore, the next step.

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