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AUTHOR Hamilton, Stephen F.
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ABSTRACT

Changes that might reduce dropout rates as high school graduation standards are raised are discussed. A review of research on successful dropout prevention programs reveals four common characteristics: (1) they separate potential dropouts from other students; (2) they have strong vocational components; (3) they utilize out-of-class learning; and (4) they are intensive in the sense of providing small group or individualized instruction, having low student/teacher ratios, and offering more counseling than ordinary schools. A brief examination of West German secondary schools, which emphasize the "dual system" of apprenticeship combined with part-time vocational schooling, helps identify and elaborate upon issues related to the first three characteristics. While differentiation among students may be a troubling practice because it can harm the achievements and self-evaluations of students identified as slower than average, the probable consequences of assignment to a lower group can be favorable. The practical, real life quality of vocational education is more comfortable and effective for marginal students than abstract academic education. Vocational education or manual training can serve as a vehicle for teaching academic and general skills rather than specific competence for employment. The assumption found in recent secondary education reform proposals that the classroom is always the best environment for learning is not supported by research. Marginal students who have not been successful in classrooms need planned opportunities to learn in other settings. (JD)

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RAISING STANDARDS AND REDUCING DROPOUT RATES:
IMPLICATIONS OF RESEARCH FOR RECENT SECONDARY SCHOOL REFORM PROPOSALS

Stephen F. Hamilton
Cornell University

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Introductory Summary

This paper begins with the assumption that raising standards in secondary schools without making other organizational and instructional changes would increase the dropout rate because those students who now drop out would continue to do so and some additional proportion of marginal students or potential dropouts would move into the dropout category rather than increase their efforts sufficiently to graduate from high school. The aim of the paper, therefore, is to identify what changes might reduce dropout rates as standards are raised.

A review of research on successful dropout prevention programs revealed four common characteristics:

- they separate potential dropouts from other students;
- they have strong vocational components;
- they utilize out-of-classroom learning;
- they are intensive in the sense of being small, individualizing instruction,

having low student/teacher ratios, and offering more counseling than ordinary schools. A brief examination of West German secondary schools, emphasizing the "dual system" of apprenticeship combined with part-time vocational schooling helped to identify and elaborate upon issues related to the first three characteristics.

Differentiation among students, although it appears to be an essential component of successful dropout prevention programs, and of West German schools, is a troubling practice because research has demonstrated that it can harm the achievement and self-evaluations of students identified as slower. Nonetheless, such differentiation seems justifiable in the absence of large-scale societal and educational change when the basis is accurate and appropriate, the barriers created among groups of students are no greater than required for effective instruction, the process and implications of assignment to a lower group are understood by students and parents, and the probable consequences of assignment to a lower group are favorable. Research does not

support the claim that vocational education at the secondary level trains young people for employment. However, the practical, real-life quality of vocational education is more comfortable and more effective for marginal students than abstract academic education. Therefore, vocational education or manual training can serve as a vehicle for teaching academic skills and general rather than specific competence for employment.

The assumption found in recent secondary education reform proposals that the classroom is always the best environment for learning is not supported by research. Marginal students in particular, who have not been successful in classrooms, need planned opportunities to learn in other settings.

Assumptions and Definitions

The purpose of this paper is to synthesize research bearing on the implications of recent recommendations for the reform of secondary schools for potential dropouts, also referred to as marginal students. Dropouts will be defined as students who choose to leave school before graduating although they are intellectually capable of doing the work required for graduation. Excluded from this definition are those with such severe learning disabilities that they are unable to perform high school level work and those who are expelled or otherwise pushed out of school.

Two stipulations must be stated before proceeding. First, this paper accepts the assumption that reducing the proportion of high school dropouts is a Good Idea, despite the complexities of the issue. Bachman, O'Malley, & Johnston (1978) demonstrated that failure to complete high school by itself is not the watershed it is often claimed to be. They compared dropouts in their longitudinal study with graduates having similar characteristics, and found that the two groups' labor market experiences in the first few years after high school were not noticeably different. Dropping out is not the cause of labor market difficulties, the authors

argued, but a symptom of underlying personal attitudes and behaviors that render these young people marginal both in schools and in work. In the same vein, Elliott and Voss (1974) also employed a longitudinal study to demonstrate that, contrary to common expectations, dropping out of school actually reduced delinquent behavior. Dropping out, they claimed, reduces the conflicts and frustrations that marginal students experience in school, thus reducing their delinquency.

Eliminating dropping out altogether would not necessarily benefit marginal students. If all job applicants have high school diplomas, then having a high school diploma ceases to confer an advantage on job applicants (Berg, 1971). However, at the individual level, it would be irresponsible to counsel a marginal student to drop out because the diploma can confer advantages in comparison with other competitors in the labor market and because not having the diploma excludes some options for employment and further education. Moreover, there are personal and societal benefits to learning that go beyond the accumulation of human capital. Therefore, despite some reservations, I accept for present purposes the assumption that reducing dropout rates would be beneficial, especially considering that all of the recent reform proposals have stressed that a high school diploma should be more than a certificate of attendance.

The second stipulation is an assumption that the implementation of reform proposals calling for higher standards would increase dropout rates unless accompanied by other reforms in school organization and instructional practice. None of the research on dropouts that I have read suggests that demanding more of marginal students, whether in terms of examinations passed, courses taken, or time spent in school, would encourage more to remain in school. Therefore, I would predict that raising standards without making other changes would push some marginal students over the line without retaining current dropouts, thus producing a higher dropout rate. Hence the motivation for this paper's purpose of identifying what some of those other changes might be.

A final caveat is that although this paper presents insights from educational research with respect to this issue, the reader should not infer that educational research is sufficient to determine educational policy and practice. Research can contribute to what Cohen and Garet (1975) have termed the dialogue of policy making and it can inform practitioners, but research results are never powerful enough to dictate policies and practices, nor can research take into account all of the influences that can and should bear upon policy and practice.

Overview

The paper will first review evaluation studies of dropout prevention programs to identify practices that seem to reduce dropping out. It will then describe the the West German secondary schools with special emphasis on the dual system of apprenticeship combined with part-time vocational schooling, in order to make the point that alternative structures for secondary schools might reduce dropping out. Finally, it will examine three issues raised by the review of dropout prevention programs and West German schools as they relate to recent reform proposals and in the light of available research: differentiation among students, vocational education, and learning outside of classrooms.

Dropout Prevention Programs

A computer search of reports on dropout prevention programs was conducted using the index compiled by ERIC (Educational Resources Information Center). The search yielded a surprisingly small number of reports and only a few offered both program descriptions and data indicating programs' effectiveness. More reports are available on programs for people who have already left school, but they are not reviewed here. The best documented and most informative programs will be described individually. Two previous reviews of programs will also be summarized. The conclusion of this section will extract common characteristics of effective dropout prevention programs.

Introduction to the Allied Health Professions

This program placed high school students, beginning in their first semester, into hospital jobs, both as an orientation to health care occupations and as an incentive to remain in school. Students received academic credit and a small stipend for their work. Both project staff and regular high school staff provided special counseling to participants. Grade point averages showed a modest advantage for participants compared to controls and over the project's first two years, only 2.6% of participants dropped out, compared to 8.9% of controls (Fielstra & Chrispin, 1972).

Project MACK

An effort by McClymonds High School in Oakland, California, to reduce the dropout rate, increase attendance, and improve students' attitudes toward school, Project MACK was evaluated during the 1974-75 school year. It featured work experience and career education along with basic academic subjects and strong support services, including guidance and counseling, a health program, and student activities. Compared to 1970 rates, before the program began, dropping out declined by the end of the 1974-75 year from 16.9% to 6.2%. Class cutting and absenteeism also declined and test scores in reading and math improved (Adwere-Boamah, 1975).

Career Intern Program

Since its development as a demonstration project in Philadelphia funded by the National Institute of Education, the Career Intern Program (CIP) has been adopted in many other locations, often with funding from the Youth Employment and Demonstration Projects Act of 1977 (YEDPA). CIP is an alternative high school that aims to help dropouts and potential dropouts earn a high school diploma and prepare for either employment or further education. Instruction is tied closely to employment

demands. All academic courses are infused with career information. Work experience is an integral part of the main phase of the program, with students moving through two to four workplaces. Individual instruction, independent study, and counseling are part of the program. The program continues to serve students until they have enrolled in vocational or on-the-job training for six months or post-secondary education for a year. An evaluation study compared 286 CIP students with a control group chosen randomly from non-selected applicants. It showed that between January, 1974, and December, 1975, 67% of CIP students had either graduated or were still attending school, compared to 13% of those in the control group. A follow-up of 77 graduates in the fall of 1975 found 71% either employed or enrolled in post-secondary education but only 39% of the controls. Higher school enrollment among CIP graduates accounted for most of the difference (Gibboney & Langsdorf, 1979; see also Langsdorf & Gibboney, 1977, and Treadway, et al., 1981).

Youth Incentive Entitlement Pilot Projects

Based upon research indicating that youth who fail to graduate from high school and fail to establish significant work experience are at greatest risk of persistent unemployment as adults, the Youth Incentive Entitlement Pilot Projects (YIEPP) sought to increase the likelihood of high school graduation and provide paid work experience to disadvantaged youth ages 16-19. The long-term goal was to improve their adult employment and earnings. The basic strategy was to provide employment, full-time during the summer and part-time during the school year, on the condition that participants either remain in or return to high school. In addition, YIEPP guaranteed employment to any eligible youth within the 17 target communities. This was the "entitlement." Like other YEDPA programs, YIEPP's purpose was not only to provide services to the target population but to add to policy-makers' knowledge of effective strategies for dealing with youth unemployment, hence the designation of pilot projects and the quite elaborate evaluation design.

As a dropout prevention program, YIEPP was not spectacularly successful. School enrollment for the first year of operation (1978) was found to be 4.8% higher in the pilot sites than in comparable communities without the program. In 1979, the difference declined to 2.5%. These figures are modest, but the conservative nature of the evaluation design is at least partially responsible. This was not a comparison between participants and non-participants but between overall enrollment rates in entire communities. Therefore even small increments in enrollment represent large numbers of young people remaining in school, and the program was found to be even more effective in attracting dropouts back into school than in retaining potential dropouts. It also accomplished its other goals of providing paid work experience and demonstrating that labor force participation of disadvantaged youth is limited, for all practical purposes, solely by the availability of jobs (Farkas, et al., 1980; Farkas, et al., 1982; see also Gueron, 1984; Pines, Ivry, & Lee, 1980). YIEPP was reminiscent of the earlier Vocational Exploration in the Private Sector program in its basic strategy but more effective at reducing dropping out (Sprengel and Toney, 1974). In general, federal youth employment programs have been more effective for older out-of-school youth than for high school students and either ineffective (Mangum & Walsh, 1978) or modestly effective (Taggart, 1982) at reducing dropping out.

Review of Effective Dropout Prevention Programs

Lotto (1982) identified 17 dropout prevention programs emphasizing vocational education for which evidence of holding power has been collected. Most of the programs were found by contacting various funding agencies, thus revealing reports that have probably not been published. The author found three common characteristics in these programs. First, each utilized a variety of strategies rather than depending on only one approach, and these strategies were well integrated. Second, all of the programs removed potential dropouts from their ordinary schools and placed

them in different kinds of environments. Third, the participants constituted a small population for which resources were narrowly targeted and concentrated.

Wisconsin Programs for the Marginal High School Student

Wehlage and his colleagues at the University of Wisconsin-Madison have engaged for several years in research, staff training and technical assistance to reduce dropping out of high schools. They described six exemplary programs for marginal students in Wisconsin high schools that were effective in terms of reducing truancy, increasing credits earned, and generating favorable testimony from students and educators. A list of characteristics of effective programs summarizes their findings (Wehlage, 1983; Wehlage, Stone, Lesko, Nauman, & Page, 1982). They found small size and autonomy to be uniform organizational features of the programs. Teachers accepted responsibility for their students' success and communicated to their students an expectation of success, defined in relation to the students' previous work rather than according to a uniform standard. Teachers combined expectations of success with caring for students, which was expressed by teachers taking responsibilities beyond those normally associated with their role. The teacher culture was characterized by collegiality, with a counterpart supportive peer culture among students, often described as a family atmosphere. Curriculum and instruction in the programs emphasized individualization in cooperative group settings. Many classes emphasized real-life problem solving. Most important, according to the investigators, was a careful use of experiential learning to complement and motivate classroom learning.

Characteristics of Effective Dropout Prevention Programs

The foregoing programs vary widely in scope; several took place in one school, while others were widespread nationally funded efforts. However, they share

some common features that raise important issues regarding the nature of schools and school programs that might reduce dropping out. One feature is the separation of potential dropouts from other students and their placement in programs that differ markedly from the ordinary high school experience. In some programs, potential dropouts are even combined with actual dropouts. A second shared characteristic is a strong vocational emphasis. Students learn practical, often job-related skills in school and apply academic learning to real-life situations. Third, usually but not always as part of the vocational emphasis, much learning occurs outside of the classroom, often in connection with paid employment. Finally, all the programs are intensive, in the sense that they have low student/teacher ratios, individualized instruction, strong counseling components, and small size.

The first three characteristics identify the issues that will be examined in the light of research for their implications for improving secondary schools. The fourth characteristic, intensity, does not lend itself to such analysis because of its breadth and the many distinct practices defining it here. Further research on these practices would be valuable.

Secondary Education in West Germany

A brief look at West Germany's secondary schools may help to clarify some of the issues raised thus far and to suggest some alternative approaches. However, those schools do not provide a model that could be adopted whole in the United States because the cultural values and institutional supports underlying them are different in this country.

Differentiation occurs early in West Germany and is quite strong. Beginning in the fifth grade, students whose parents want them to prepare for the university and whose performance indicates that they are able to do so are removed from the main school (Hauptschule) and sent to the university preparatory school (Gymnasium). This

school continues through grade 13 and offers a highly demanding arts and sciences curriculum. Students take at least two foreign languages, and graduates have the equivalent of the first year or two of college in the United States. When two or more Gymnasien are available, they specialize, for example, in mathematics and science or classics, and students choose which to attend on the basis of their interests, plans, and the school's reputation.

Two years later, at the beginning of grade 7, a second selection occurs in the Hauptschule. Students of middle ability depart for technical secondary schools (Realschulen), where they prepare for commercial and technical occupations, graduating after grade 10. Those students who do not qualify for or whose parents do not wish them to attend one of the more selective secondary schools, remain in the main school through grade 9 (in some cases grade 10). Comprehensive schools (Gesamtschulen) have been established as an alternative less differentiated structure in some locations, but they enroll only 16% of all students and half are simply the three traditional types of schools under the same roof (Körner, 1981).

As in U.S. tracking systems, movement from one of these levels to another is possible, but almost always in a descending direction. A student who chooses to leave the Gymnasium after grade 10 receives the equivalent of a Realschule completion certificate. Upward movement, when it occurs, often requires repetition of all grades not taken in the higher-level school; it therefore becomes daunting after a year or two.

Over the past two decades there has been a strong effort to add flexibility to this system. The principal result has been the expansion of an alternative route to the university, the second educational path (der zweite Bildungsweg). It is now possible to achieve university entrance through a combination of advanced trade training and attendance at an evening Gymnasium. University study must be in an area related to one's vocational training, and the number of people with

sufficient stamina who can also afford to forego full-time earnings as adults to take advantage of this possibility is quite small, but it does offer a second chance at least in principle.

Although full-time schooling may be completed for those in the main school by age 15 and for Realschule students by age 16, schooling is compulsory through age 18. The gap is filled by an array of advanced full-time vocational schools but most notably by the dual system of part-time vocational schooling combined with apprenticeship. Half of the 16-18 year-olds in West Germany are involved in this system (Grund- und Strukturdaten, 1983/84, p. 80). Participants include about half of those completing the main school and one-third of those completing the Realschule (Berufsbildungsbericht, 1984, p. 43). Apprenticeship rather than school constitutes the primary educational setting for West German youth not going on to the university.

The medieval image of a young man learning a trade while assisting a craftsman does not do justice to the West German apprenticeship system. Apprentices are trained in a wide range of occupations — about 450 leading to over 20,000 more specialized occupations (Deutscher Industrie- und Handelstag, 1982, p. 7) — including male and female-dominated occupations and non-manual occupations. It is nearly impossible to enter those occupations for which apprenticeship programs exist without completing an apprenticeship, which requires from two to three-and-a-half years and a passing examination grade.

Employers, educational authorities, and unions participate in planning apprenticeship programs. Apprentices and their parents sign contracts with employers, the terms of which have been determined by collective bargaining and are standard within each occupation. Apprentices receive modest stipends, normally in the range of \$100 - 200 per month, and they are entitled to an agreed-upon paid vacation which is typically four weeks. Apprentices who complete their training and pass the

qualifying examination are certified to be skilled workers and are, by law, entitled to earn the wages determined by collective bargaining for their occupation.

This system has flaws. The most serious is a shortage of apprenticeship positions at a time when recession has caused a shortage of jobs while the youth population has peaked. But, the system does provide a smooth and rewarding path from school to career for the majority of young people who do not enter higher education. More than half of all successful apprentices are employed by the firms in which they were trained two years after the completion of their training (Williams, 1981). Most others find jobs as skilled workers in the same occupation. Those who change occupations retain the advantage of their training, not only as a fall-back possibility but as a powerful credential. Employers view successful apprentices as trainable and reliable workers and are willing to invest in further training to fit them to other skilled occupations. As a result, many young people establish themselves in well-paid careers with security and advancement possibilities between the ages of 18 and 20. (Males must complete 15 months of military or alternative service, which usually come between apprenticeship and career entry.) The contrast with non-college youth in the United States is stark. Here employers view young people as inherently irresponsible and seldom offer them career entry positions until they are in their early to mid-20s (with the exception of females trained in clerical skills). The modal transition from school to career for non-college males in the United States includes a floundering period of four to six years, taken up with low-level jobs in the secondary labor market, interspersed with periods of unemployment (Barton, 1976; Osterman, 1980).

Differentiation

West German schools differentiate very strongly and very early among students they consider to have varying abilities and divergent futures. Although this

practice seems undemocratic because it severely limits the educational opportunities of a large proportion of young children, it has one great advantage over more weakly differentiated U.S. schools: The lowest track leads directly to remunerative and productive employment. Differentiation is also accomplished publicly with the clear understanding of parents and students of its implications. Ironically, German schools differentiate primarily at the school level. Within elementary school classrooms there is little of the subgrouping by ability that is nearly universal in U.S. elementary schools, and within secondary schools the curricular tracks that in fact strongly differentiate U.S. comprehensive high schools are unnecessary since students have already been sorted among schools.

The dilemma raised by differentiation among students in schools is a persistent one, not only in education but in U.S. society more broadly. The subtitle of Gardner's (1961) well-known book, Excellence: Can We Be Equal and Excellent Too? states it well. It is represented in the successful struggle to shatter the myth that segregated schools were separate but equal. The dilemma is not resolved by proposals for minimum competency tests or other attempts to raise standards for all students. If the tests and the more demanding courses can be passed by the weakest students, how can they possibly improve the education of the strongest? If a substantial portion of the weaker students fail the tests or courses, can we tolerate the increased dropout rate, especially considering that it will affect different races and classes unequally?

John Rawls' Theory of Justice (1971) helps to clarify the dilemma. Rawls addressed at some length the question of how inequalities can be justified in a democratic society. One of the principles he proposed is that inequalities may be justified if they benefit those who are at the lowest level. High salaries for corporate executives, for example, might be justified if they contributed to economic productivity, which provided jobs for the least advantaged. In schools, differentiation can be justified if it results in more learning for those in the lowest group.

Research on grouping practices is not encouraging by this criterion. Rosenbaum (1980a) cited studies and previous reviews, notably one by the National Education Association (1968), yielding mixed results regarding the achievement effects of ability grouping. Some studies found gains in achievement overall, some losses; some demonstrated advantages for slower learners, others that grouping aided faster learners. Looking at the effects of grouping on students' self-evaluations, Rosenbaum found some of the same ambiguity of results but generally strong support for the claim that being labelled average or below average makes students think poorly of themselves. This finding was strongest in those studies that actually asked students how they felt about their group assignment and the group structure in their school (e.g., Schafer & Olexa, 1971; Hollingshead, 1949), and in studies of curriculum grouping at the secondary level as compared to ability grouping. Rosenbaum concluded that the costs of grouping to the lowest students' achievement and feelings about themselves are not justified by the uncertain benefits of the practice. Good and Marshall (1984) reached a similar conclusion in their more recent review.

In view of the costs of ability grouping to those in the lower groups, students should be treated as uniformly as is consistent with optimal learning. But equality of opportunity, as Husén, (1979, p. 87) has pointed out, implies pluralism rather than uniformity, and the circumstances surrounding differentiation at the secondary level are different from those at the elementary level. If elementary and middle schools could more nearly equalize students' performance, perhaps through mastery learning techniques as advocated by Bloom (1976) and others, then secondary schools would not be forced to differentiate so much. Faced with some students capable of college-level work and others struggling to read at the third-grade level, secondary schools can hardly be blamed for creating inequality. More broadly, if differences in earnings and status among occupations in our society were less marked, then

differences in school performance could be treated purely as a pedagogical issue. It is the association of school performance with subsequent income and prestige that renders differentiation invidious.

Although I am concerned about the negative consequences of grouping or tracking, I believe the differential treatment of potential dropouts can be justified under certain conditions, which are suggested by the material presented above on dropout prevention programs and West German secondary schooling. Those conditions include the following: (1) The basis for differentiation must be accurate and appropriate; (2) the strength of the differentiation must be no greater than required for effectiveness; (3) the process of differentiation must be understood by students and parents; and (4) the probable consequences of assignment to the lowest group must be favorable and acceptable to those students and their parents. These conditions might apply to dropout prevention efforts as follows.

(1) The bases for identifying potential dropouts should be past performance and clearly expressed attitudes. Tests of aptitude or achievement and the judgments of teachers and counselors are inadequate bases. The studies reviewed by Rosenbaum (1980a) found inappropriate placements in ability groups when, for example, IQ tests were used to form reading groups, since reading ability is not identical to IQ. Teachers can sometimes substitute social class characteristics for hard evidence of ability, as Rist (1970) dramatically illustrated, and counselors can do the same with older students, as Erickson (1975) showed. McClelland (1973) argued in his critique of intelligence testing that what we want to know is what people are able to do, which is better indicated by performance on the task in question than by a score on a test of some abstract quality like intelligence. Only students who are in fact performing poorly in school and who say they are actively considering dropping out should be placed in dropout prevention programs. The West German process of differentiating students meets this criterion, although it occurs much sooner than

most Americans would think necessary. The Germans use very few tests of ability and therefore do not have to deal with the bizarre category of overachievers, students whose achievement test scores and grades are higher than they should be able to achieve according to their ability test scores.

(2) Over the past decade, the principle has been established that disabled children should be mainstreamed, i.e., taught in ordinary classrooms, to the extent that it optimizes their learning. Those struggling to establish this principle have been motivated in part by the same phenomenon noted by the research on ability grouping, namely, that labelling some students as deficient and placing them in separate groups to remedy those deficiencies can have a negative effect on their learning and self-evaluations. Programs for potential dropouts should apply the same principle and minimize the barriers separating their students from ordinary students. Students in special programs should retain access to extra-curricular activities and specialized courses in the regular school and the goal of the programs should be to move them back into the regular school if possible. With respect to this criterion, the West German system provides a bad example, since students are sent to entirely different schools for many years and movement from one to another is both difficult and rare. However, before feeling smug about the openness of our system, we should attend to Rosenbaum's (1976) finding that mobility within the comprehensive high school he studied was much more likely to be downward than upward, a finding also reported in several other studies he reviewed (Jones, Erickson, & Crowell, 1972; Evans & Galloway, 1973; cf. Rehberg & Rosenthal, 1978). According to Rist (1970), this sorting process begins in the first year of school, persists from year-to-year, and may be based on social class rather than academic ability (cf. Haller & Davis, 1980; Alexander, Cook & McDill, 1978). (3) In order for students and parents to be able to make an informed choice to enter a special program, they must understand the selection criteria and the implications of placement in the program. That this

condition is not always met in current tracking arrangements is indicated by research cited by Rosenbaum (1980a) indicating that many students in non-college preparatory tracks hope and plan to attend college (Rehberg & Rosenthal, 1978; Rosenbaum, 1980b). The West German system seems fairer than ours with respect to this criterion. In part because the intergroup barriers are so strong and the consequences of assignment to one of the lower-level secondary schools are so great, parents and students are very well aware of the implications of their placement. U.S. grouping practices, in contrast, are presented as short-term, and the opportunity for all high school graduates to attend college is so strongly emphasized that students and parents can be surprised, like many in Rosenbaum's (1976) study, to discover that they have had their options limited by a succession of group assignments whose implications they did not understand.

(4) The final condition, the probable consequences of assignment to the lowest track, is also the most important. Unless a special program for potential dropouts actually reduces the likelihood of failing to graduate, then it cannot be justified, particularly in view of the possible negative effects of publicly identifying a student as a potential dropout. This common sense criterion can be met at the aggregate level by demonstrating a lower dropout rate among participants or in a whole school, but at the individual level it is impossible to prove that a specific student would have dropped out had it not been for the program. Ideally we should also ask a more difficult question: Is the graduate who participated in the program better off five years later, both financially and otherwise, than a comparable dropout?

The West German system is particularly instructive with regard to this condition. Although West German society is strongly stratified, and those engaged in the kinds of work for which the main school (Hauptschule) followed by vocational school and apprenticeship prepare them are near the bottom of the hierarchy (The

bottom is occupied by the unemployed and the unskilled, who are predominantly foreign.), the difference in income and prestige between the top and the bottom is not so great as in the U.S. Skilled workers earn decent wages and are accorded respect for their skills. The most highly skilled have the chance to become masters, which confers upon them the right to establish their own business and to train apprentices, and gives them a high status in their community. The title, Meister, though held by only a small minority of skilled workers, undergirds the status of all skilled workers (Dickinson & Erben, in press). In short, students in the lowest track of the German system are not viewed as failures but as people not particularly well suited to academic work. They have open to them a range of rewarding occupations and some opportunities for further education. Young people who leave full-time schooling at the age of 15 can be highly skilled workers with secure, well-paid, and interesting jobs at the age of 18. Can anyone seriously argue that they would be better off spending three more years in the general track of a comprehensive high school and then being turned loose in the secondary labor market to seek jobs pumping gasoline and serving hamburgers?

The Place of Vocational Education

Vocational education in West Germany cannot be compared without qualifications to dropout prevention programs in the United States since the German system accommodates large numbers of students, including a great many who would not be potential dropouts in the U.S. Dropout prevention programs, by definition, serve only those at greatest risk of dropping out, those who most desperately need some alternative to ordinary school. However, many of those programs include some vocational components, and U.S. vocational curricula are often viewed as legitimate alternatives for students who are ill at ease and unsuccessful with academic learning. It is thus appropriate in this context to review research on U.S. vocational education and compare it with the West German approach.

The most important point to make about vocational education in our secondary schools is that, with few exceptions, it does not educate students for vocations. Numerous studies and research reviews (Berryman, 1982; Conroy, 1979; Grasso & Shea, 1979; Reubens, 1974; O'Toole, 1979; Wilms, 1984) have concluded that vocational graduates have little if any advantage in the labor market when compared with graduates of the general or academic tracks. The major exception is that young women who have learned typing and related office skills in high school are more likely to gain clerical and secretarial jobs. Overall, less than one-third of vocational graduates ever work in the occupation for which they were trained (Conroy, 1979).

This reflects poorly on the quality of the training provided in high school vocational programs, but it also reflects the realities of the youth labor market. Studies of employers' preferences with respect to young job applicants reveal first of all that many employers are reluctant to hire young people, especially young men, before they are at least 21 or 22 years old (Barton, 1976). Moreover, the majority of employers say they are much more interested in prospective employees' basic academic skills, their interpersonal relations and communications skills, and their general work skills—such as ability to take supervision, punctuality, reliability, and trainability—than in their specific job training. Most of their skilled work, employers say, is either too specific to their firms to be taught anywhere else, or it requires speed and precision in repetitious work that are not taught in vocational programs (Wilms, 1984; Lynton, Seldin, & Gruhin, 1978).

Nevertheless, there is evidence that vocational education has a place in secondary schools because it creates what Berryman (1982) called a "niche" for students who might otherwise become discouraged and drop out. Many studies have found that vocational students like their programs, especially in comparison to the regular academic programs from which they came (Davidson & Johnston, 1976). Combs and Cooley (1968) found that dropouts were much more likely to come from the general

curriculum than the vocational track. It is difficult to say with certainty that vocational education prompts dropping out, given that the strongest predictions of dropping out found by Bachman, Green, and Wirtanen (1971) were personal and family characteristics that are unaffected by curriculum. The higher dropout rate of general track students may reflect pre-existing differences rather than the impact of vocational education.

Vocational education in West Germany produces skilled workers ready for either immediate employment or more advanced education and training. In the United States, with some exceptions, vocational education is a less painful way for students who do not excel at academic work to earn a high school diploma (Claus, 1984). It is, in a sense, a huge dropout prevention program, and is sometimes touted as such. Although the dropout prevention function of vocational education is not firmly established by research, the nearly universal presence of vocational components in successful dropout prevention programs and the testimony of vocational students that they prefer vocational to academic classes strongly support the claim of its proponents that without vocational education many more students would drop out.

The place of vocational education remains a question, particularly in view of the current emphasis of the school reform movement on raising academic standards. Should vocational programs train young people for employment? If so, standards must be raised in terms of the level of work-related skills actually taught. The West German comparison suggests that this would require much more training in work sites than is now done. It is simply not feasible for school shops to have the kind of equipment that modern industry uses or to expect the same level of technical expertise from a vocational teacher as from an active practitioner selected to train apprentices. Motivation is also more difficult in a school setting than on the job. Another direction might be to view vocational education as a vehicle for teaching academic knowledge and skills. For this purpose, the old term, manual training,

might be resurrected, as suggested in The Paideia Proposal (Adler, 1983). The goal then would not be teaching specific employment skills but giving practical, concrete application to academic instruction on the one hand and teaching generalizable employee virtues such as punctuality, orderliness, and precision on the other.

For many reasons, the second direction seems more feasible than the first. The United States conspicuously lacks the tradition of cooperation among schools, employers, and labor unions that stabilizes the West German apprenticeship system. Furthermore, as noted above, there is no evidence that employers want specifically trained job applicants and therefore no likelihood that they would assume the considerable costs of a formal apprenticeship program.

Learning Out of School

The third issue raised by successful dropout prevention programs and the West German dual system is the place or potential place of out-of-school learning in secondary education. Recent reform proposals read as though no other distinguished panels of experts had surveyed the problems of secondary schools lately and proffered their considered opinions regarding improvements. In a series of reports issued between 1973 and 1979, several such groups achieved remarkable agreement in recommending that high school students spend more of their learning time in the community and less in the classroom. (See especially Panel on Youth, 1974; Carnegie Council on Policy Studies in Higher Education, 1979.) Although these groups addressed concerns that have faded from the political agenda of the 1980's, such as alienated youth and youth unemployment, those problems have not disappeared. In addition, some of the innovations that occurred along the lines recommended by these reports offer valuable lessons to contemporary reformers.

In the light of the recent reform proposals' emphases on improving basic academic skills and their explicit claims that this is best accomplished in

classrooms, the first question to ask about programs that remove students from classrooms is whether they retard academic skills. The clearest answer to that question comes from evaluations of Experience Based Career Education, a program sponsored by the National Institute of Education in which students may spend as much as 80% of their time for a full school year learning in work settings. The least favorable finding from those evaluations with regard to academic learning is that EBCE students learn no less, as measured by standardized tests, than comparable students spending full-time in classrooms (Bucknam, 1976; Owens, 1982). In a recent meta-analysis of 80 external evaluations, Bucknam and Brand (1983) found that EBCE students gained more often than non-EBCE students on tests of academic knowledge as well as tests of life attitude skills and career-related skills.

The finding of at least no harm to academic learning from out-of-classroom experiential learning programs is surprising on two counts. First, consistent with the concerns of the school reform panels of the 1970s, the programs aim primarily at non-cognitive learning, more broadly toward enhancing the development or socialization of adolescents. That good experiential learning programs can have positive developmental effects has been demonstrated by Conrad and Hedin's (1982) large-scale evaluation study. Second, the design of experiential learning programs fits poorly with the structure of standardized tests. Such tests seek to identify common areas of learning, but much of the academic learning that occurs via experience is idiosyncratic. It depends on the site, on the nature of the activity, and on the interests and choices of the individual student. A student serving as an intern in a county tax assessor's office, for example, might learn some applied mathematics and something about local government but be able to demonstrate neither on a standardized test. Even if a test were to tap this learning, it would only show gains for that one student and not for classmates placed in a nursing home and a theater (Hamilton, 1981).

There is, nonetheless some empirical ground for optimism regarding the measurable contribution of experiential programs to academic learning. MacKenzie and White (1982) found that 8th and 9th graders participating in an active excursion retained geographical facts much better than those receiving either a passive excursion or no out-of-classroom instruction. All three groups received the same classroom instruction, and both excursion groups demonstrated slightly better learning immediately after the treatment. Agnew (1982) added experiential components to high school courses in a variety of subjects without varying the total amount of instruction time and found that out-of-classroom activity improved students' performance on tests of subject matter. Hamilton and Zeldin (1983) compared the attitudes toward and knowledge about local government of three groups of high school students: interns to county legislators, control groups of students waiting to enter the same intern programs, and comparison groups of students enrolled in civics courses teaching about local government. The interns showed greater gains in knowledge and attitudes than either of the other groups. These studies not only demonstrate the potential of out-of-classroom educational programs, but also suggest the importance of integrating in-class instruction since all of them included both, as does EBCE.

The West German comparison is again instructive. The educational value of apprenticeship is unquestioned, although there are debates about its duration and content. Recent efforts to extend schooling at the expense of apprenticeship have not been notably successful, in large part because both employers and parents view school-based training as a second choice, a fall-back activity in case an apprenticeship position cannot be found (Sonntag & Frieling, 1983).

The reliance of successful dropout prevention programs on out-of-classroom learning, the effectiveness of experiential learning programs, and the example of the West German dual system all argue that the concentration of recent reform proposals on in-class instruction is unwarranted, particularly for marginal students.

Out-of-classroom educational programs should be part of current efforts to improve secondary schools. Integrating classroom and experiential components should be high on the agenda of designers of such programs.

Experiential education also offers a strategy for coping with some of the dilemmas identified in connection with both differentiation and vocational education. Learning outside of the classroom breaks down some of the barriers between previously successful and unsuccessful students because new skills and new combinations of skills are called for. A group project may require many different skills, and some of the slower students will either already have them or acquire them more quickly than those who excel in the classroom. Many of those skills, in addition, will be related to vocations but can be acquired at least to the beginner's level without choosing and training for a specific vocation.

Conclusion

If standards are raised for high school graduation without addressing the special needs of marginal students, then fewer young people will graduate from high school. Although there are distinct dangers to identifying some students as marginal and separating them from others, the evidence reviewed above favors providing programs for students at risk of dropping out that are more intensive, include manual training, and involve learning outside of classrooms. The dangers of labelling potential dropouts could be avoided by making the same opportunities available to all students.

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