SCHOOL DROPOUTS OCCUR MOST OFTEN AMONG BOYS IN THE 10TH GRADE OF ACADEMIC COURSES. EVIDENCE SUGGESTS THAT THEY AND OTHERS WHO FINISH HIGH SCHOOL WOULD HAVE HAD MORE PERSONAL SATISFACTION AND VALUE FROM A VOCATIONAL-TECHNICAL CURRICULUM. OCCUPATIONAL PREPARATION, IF PROVIDED IN SCHOOLS, CAN MAKE STUDENTS READY FOR SUCCESSFUL INTRODUCTION TO EMPLOYMENT OR TO POST HIGH SCHOOL TRAINING, THUS GIVING THESE YEARS MORE VALUE TO THE STUDENT WHILE LOWERING THE RATE OF HIGH SCHOOL DROPOUTS. A CONCENTRATED PROGRAM OF OCCUPATIONAL GUIDANCE BEGINNING EARLY IN ELEMENTARY GRADES, CAN IMPART ACCURATE INFORMATION ABOUT MANY FIELDS OF WORK AND NURTURE POSITIVE ATTITUDES OF RESPECT AND ADMIRATION FOR LABOR. ONE OF THE MOST COMPREHENSIVE CURRICULUM PLANS FOR SUCH A PROGRAM IS THAT ADOPTED BY THE MICHIGAN DEPARTMENT OF EDUCATION AND REPRODUCED HERE IN THE APPENDIX. IT PROCEEDS FROM THIS START IN THE EARLY GRADES TO A STIMULATION OF INTEREST IN JUNIOR HIGH AND A TRAINING IN HIGH SCHOOL, NOT IN THE NARROW RESTRICTED SPECIALITIES, BUT RATHER IN BROAD OCCUPATIONAL CLUSTERS. TOOLS FOR INCREASING THE EFFECTIVENESS OF SUCH A PROGRAM OF OCCUPATIONAL PREPARATION INCLUDE: (1) OCCUPATIONAL GUIDANCE AND TESTING CENTERS, (2) ON-THE-JOB ORIENTATION OF COUNSELORS, (3) ADVISORY COMMITTEES FOR VOCATIONAL-TECHNICAL PROGRAMS, AND (4) EXPANDING THE USE OF PRESENT VOCATIONAL-TECHNICAL FACILITIES.
The Nevada Research Coordinating Unit is partially supported by a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. (Grant OEG 4-6-062723-2214, Project 6-2723.) Points of view or opinions expressed herein do not necessarily represent official Office of Education or Nevada Research Coordinating Unit position or policy.
ABOUT THE AUTHOR:

Dr. Robert McQueen earned both a Bachelor's and Master's degree in Psychology from the University of Denver, subsequently receiving a Doctor of Philosophy degree in Psychology from the University of Texas in 1955. A Professor of Psychology at the University of Nevada, he has been a member of that faculty for more than fourteen years, assuming additional duties this year as Assistant Dean of the College of Arts and Sciences. A member of the Governor's Comprehensive Health Planning Council, Dr. McQueen also serves as President, Nevada State Board of Psychological Examiners.

This publication is the result of a study of vocational-technical education in the Washoe County Nevada School District. The Project began in November 1966 and was a cooperative effort of the School District and the Nevada RCU.
CONTENTS

INTRODUCTION 1

OCCUPATIONAL PREPARATION 3

CULTIVATING POSITIVE ATTITUDES 5

THE JOB-CLUSTER CONCEPT 8

OCCUPATIONAL GUIDANCE AND TESTING CENTERS 11

ON-THE-JOB ORIENTATION OF COUNSELORS 14

ADVISORY COMMITTEES FOR VOCATIONAL-TECHNICAL PROGRAMS 16

EXPANDING THE USE OF PRESENT VOCATIONAL-TECHNICAL FACILITIES 18

SUMMARY 21

APPENDIX 25
INTRODUCTION

Recently gathered evidence indicates that the proportion of students who withdraw from high school before graduation has neither risen nor fallen significantly during the past half dozen years.1 However, a detailed analysis of the dropout trends of one school district revealed it to have, in common with numerous other districts studied throughout the nation, a small but significant proportion of students who fail to find the school environment either satisfying or meaningful to them. Confirming other research, this dissatisfaction was found to be far more typical of boys than girls and expresses itself in school withdrawals most frequently sometime during the tenth grade.

While to conclude from this same study that a radical change in vocational-technical offerings would completely eliminate this slippage in the holding power of the schools would be unwarranted, it is nevertheless apparent that many students who elect to terminate an educational experience having primarily an academic focus would find renewed interest in training programs with a considerably greater vocational emphasis. There is additional, and perhaps, even more significant evidence to suggest that some of the students who do complete their essentially college-preparatory high school programs with neither episodes of failure nor periods of

1 A Study of Vocational-Technical Education in the Washoe County School District, Nevada Research Coordinating Unit, J. Clark Davis, Director, 1968.
interruption would have pursued a vocational-technical curriculum with
greater enthusiasm and with more personal satisfaction.

It is also unmistakably clear that for some students nearing the mid-

point of their high school program there is a marked flagging of academic
interests and a general deterioration of motivation for formal instruction.

These students, many of whom, interestingly enough, later seek out adult
vocational-technical training, reject outright any invitation to participate
in such programs while they are high school students. For them, evidently,
the need to cast off the restraints of years of adult supervision, or simply
the growing determination to win their freedom and independence, com-
pletely transcends such practical goals as preparing themselves for the
work-a-day world. Yet, for some the strides toward maturity which they
subsequently make in the course of two or three years devoted to relatively
ineffectual pursuits seem not only to be greater than those which might
have been brought about through enforced continuation of their formal edu-
cation, but are perhaps best reflected in the vigor they bring to training
programs in which they later enroll as young adults. This marked change,
so reassuring to educators, clearly underscores the need to both maintain
and strengthen the post-secondary and adult education curricula.
OCCUPATIONAL PREPARATION

The major error made by many people when they contemplate the purpose of vocational-technical offerings of today's high school is the hasty presumption that graduation should result in a finished vocational product; that the student should move directly from the school to the office, or the plant, or the factory as a full-time, fully trained worker. While recognizing a few exceptions, most notably in the area of business education, virtually none of the authorities in the field of vocational-technical education share this view. Quite to the contrary, they contend that this is not only expecting too much of the high school, it is also expecting too much of 17 and 18 year old youths. Rather, it is agreed that the high school should gear its vocational-technical program to the more general goal of occupational preparation.

The objective of occupational preparation is to shape students in a general way for successful introduction to employment or to post-high school training. Successful introduction to employment does not require the new worker to be a skilled craftsman, but rather one who is acquainted in a broad way with the work requirements of his field, have a genuine willingness to work, and a receptive attitude toward learning the necessary skills.

As in years past, employers continue to place a high value upon the basic educational fundamentals of reading, writing and computing for their...
new recruits. They emphasize that without these skills to serve as a foundation for subsequent learning, the best motivated young employee will start his work career with a singular lack of promise.

It appears true that in the vast majority of cases, employers not only view 17 or 18 year old workers as too immature to shoulder the responsibilities typically assigned to craftsmen, but, moreover, they prefer to offer them the requisite specialized training in their own fashion. Inevitably, some of the maturity so appreciated in the journeyman can accrue to the young worker only through the seasoning of on-the-job experiences.

The aims and objectives of the high school vocational-technical program should not be confused with those of a Community College or with Adult Education undertakings. These post-secondary programs are properly pointed toward developing readily marketable skills at above an entry level of proficiency for young adults and older students. The vocational-technical aspects of the high school, by contrast, should devote themselves largely to the grooming of the adolescent for a smooth and efficient introduction to the world of work.
CULTIVATING POSITIVE ATTITUDES

There is general agreement that the young person just entering the labor market has a critical need to build his growing fund of skills on a firm foundation of positive attitudes toward work in general. While Career Days and some social study units touch on this objective, for most students such experiences are too few, too brief, and too scattered to achieve the lasting impact that is needed. In an era where complex professional skills are especially glamorized, and in a classroom where the teacher is a college graduate with a professional bias, the dignity and desirability of the vocational arts are all too often underemphasized, sometimes subtly disparaged, and frequently neglected altogether. What is needed to counteract this slow infusion of the young person with negative attitudes toward the manual pursuits is a concentrated program of occupational guidance which has its beginning in the earliest elementary grades and which aims not only at imparting accurate information about numerous fields of work, but which nurtures positive attitudes of respect and admiration for all labor which contributes to the making of a better social order. Both the work and the worker should be held up for the student's approval and approbation.

Efforts to bring about such attitudinal changes require a daily emphasis not unlike that which schools have long placed on the concepts of care of property and individual integrity. Moreover, occupational guidance
in the elementary grades should be closely articulated with complementary programs at the junior and senior high levels. This objective is so important that it can no longer be left informally to the individual teacher to include as he or she chooses in haphazard fashion, but rather should be the direct responsibility of personnel specifically assigned at all school levels to the task of vocational guidance. A necessary first step in that direction would be the inclusion of an occupational guidance component into the overall curriculum plan for the entire range of public school grades. There are numerous models for such a component, but one of the most comprehensive available is that adopted by the Michigan Department of Education and reproduced here in the Appendix.

The Michigan model carries the concepts of vocational and occupational education from the early elementary grades through the intermediate levels and on into high school years, and then beyond to the post-secondary and adult education programs. It begins with planned instruction designed to give children in the lower grades an awareness of the workaday world. The junior high students' occupational interests are stimulated with exploratory and pre-vocational experiences. The high school student receives training, not in narrow, restricted work specialties, but, rather in broad occupational clusters. The post-high school and adult students are provided the specific training necessary to equip them for a particular job or, as also happens, to up-grade their present proficiencies, or to re-train
them for new work careers.

The most critical element necessary for the effective execution of the Michigan model or any similar model, is the provision of trained personnel to carry it through. Necessary also are clearly specified blocks of time which must be set aside at every grade level to permit a proper presentation to students. The latter can be accomplished with maximum effect only when the vocational and occupational components of the curriculum are skillfully articulated with the on-going academic programs.
THE JOB-CLUSTER CONCEPT

Schools should re-examine their standard vocational-technical offerings with a view toward modifying them in a number of important ways.

First, if the premise is accepted that the high school should not strive to turn out a finished vocational product, then the current and widespread practice of students taking three years of a single vocational course, i.e., auto mechanics or woodworking, becomes an extremely questionable one. If, rather, the high school should concern itself with offering exploratory occupational experiences, then one year should be an adequate amount of time in which to explore auto mechanics, or woodworking, or nearly any other work area. Very probable in many instances, an adequate exploration may be completed in a single semester or less.

The secondary student should find most beneficial instruction relevant to a "cluster" of closely related occupations all bound together in one family of work. A report issued by the Rockefeller Brothers Fund underscored the advantages that an individual would enjoy if his high school vocational preparation were based on this cluster concept:

In this day of technologies that become antiquated overnight, it is hazardous to predict a favorable future for any narrow occupational category. There will be economic advantage to the individual in acquiring the kind of fundamental training that will enable him to move back and forth over several occupational categories. Individuals so trained will find a market for their talents under most circumstances. Individuals more narrowly trained will be at the mercy of circumstances.2

Cluster courses in upper grades of high school should be designed so that the instruction given is basic to most of the occupations to be found within that work cluster. The ten to 15 clusters of occupations that will be needed at this level should be determined by critically analyzing the commonalities among various occupations. Several research efforts have identified logical occupational clusters. By way of illustration only, the groups of occupations listed below appear to have much in common and do make for logical groups into job clusters.

1. Office occupations
2. Graphic communication occupations
3. Production agriculture and related occupations
4. Metal processing occupations
5. Construction occupations
6. Transportation service and repair occupations
7. Hospitality occupations
8. Health occupations
9. Distributive occupations
10. Electricity-electronics occupations
11. Family and community service occupations

It may be wise at this point to recall that the Dictionary of Occupational Titles lists 21,741 different occupations and, consequently, the 11 job clusters cited above scarcely represent a complete nor exhaustive enumeration. Since the very essence of the cluster concept is that it tailors the training of the high school student to cut across numerous jobs within each broad work area, it consequently opens a far wider spectrum of work situations to him than could possibly be achieved through narrow, single job specializations. In so doing, it takes full heed of the note of caution...
sounded in the Rockefeller Brothers Fund report, quoted earlier, and leaves the individual vocationally far less "... at the mercy of circumstances."
OCCUPATIONAL GUIDANCE AND TESTING CENTERS

To insure that a vocational-technical program remains continually in tune with the changing nature of the labor market and that it achieves its ultimate objective of smoothing the way for a great variety of youngsters to enter the world of work, schools should move toward the establishment of Occupational Guidance and Testing Centers. Such centers should be created on a par with traditional Counseling Departments and should be staffed with personnel specifically trained in occupational guidance. In this connection it should be emphasized that today's school counselors typically have little formal training in the field of occupational guidance. Most university counseling programs include barely more than a single course in occupational information and many do not even offer that. Yet clearly, to achieve expertise in this field requires considerable training, and only those persons properly schooled in the discipline can offer the best occupational guidance to the youth of a community. More and more, universities are recognizing the essential distinction between educational counseling and occupational guidance and are moving toward the creation of separate professional programs for each. Notable among the institutions of higher education that offer advanced degrees in occupational guidance are Purdue University and Arizona State University. Others have programs of comparable quality and many more are developing them.

An Occupational Guidance and Testing Center would address itself
not only to the more obvious tasks of assessing occupational aptitudes and abilities, but would also work to bring these two into better alignment with the student's self-concept and his level of aspiration. While schools for decades have traditionally exhorted children to set high goals, there has been an insufficient amount of organized effort to ascertain whether some goals, high as they may seem, might not, to the lasting benefit of both child and community, be elevated still higher. Conversely, there has been even less effort to counsel others to lower their sights when evidence suggests that they have set a course toward almost certain failure. Pursuing this last point a step further, the admonition so often offered to the young by the old that they should "hitch their wagon to a star" when applied to vocational goals does not always hold up well under close scrutiny. This advice though plainly well intentioned, has launched untold numbers of youngsters into training programs to which they bring no aptitudes in the beginning and from which they take no saleable skills at the end. The years thus spent in futile pursuit of goals which for reasons, perhaps, of intrinsic limitations were sealed off from the student from the very start could, with skillful guidance, have been devoted to actually reaching important vocational objectives which all along were obtainable.

A well-staffed Occupational Guidance and Testing Center would have the expertise to deal with these and related problems of tremendous individual importance. Problems which today are all too often resolved by chance
decisions or simply through trial and error.
ON-THE-JOB ORIENTATION OF COUNSELORS

Recognizing that many present educational counselors will continue to serve as the primary source of occupational information for large numbers of students, schools should initiate a vigorous program of on-the-job orientation of counselors. This orientation would feature counselor visits to numerous employers providing for the school personnel a close study of the various job situations, their range of requirements, and other factors of importance which the counselor may later convey to young people contemplating entry into that work area. Many employers would cooperate enthusiastically in such an undertaking and its execution would, in addition, open still another important line of communication between the schools and the work-a-day world.

In agreeing with the need for this new relationship, some employers have observed that a school counselor is often placed in the untenable position of recommending that a student consider work in, for example, the culinary arts without that counselor ever having had even the briefest glimpse into the workings of a major food operation. The same lack of awareness may characterize a counselor's recommendation that a youngster consider a career in merchandising, in automotive repair, or in one of the health occupations. On-the-job orientation of counselors, while less desirable than a staff trained in occupational guidance, aims at affording the school counselor a first-hand view of occupations and a dynamic
"feel" for the work involved which he could never achieve through the mere perusal of job descriptions and work manuals.
ADVISORY COMMITTEES FOR VOCATIONAL-TECHNICAL PROGRAMS

While many schools throughout the country have made some use of citizen advisory committees in their vocational-technical programs, particularly for those training classes offered after regular school hours, the need is clear for such relationships to be increased extensively to include all vocational-technical programs, day as well as night. In a technological society such as ours the demands of industry are in such a constant state of flux that a close partnership of educational institutions and the representatives of industry have become a requirement of paramount importance. Because occupational patterns change with the evolution of new technological developments, they can best be translated for the educator and communicated on to the student by first involving industry's own "men-on-the-scene."

The most effective pattern for utilizing local advisory committees is to establish them on two levels. One would be a General Advisory Committee whose members would be drawn from all quarters of the employment and labor fields. For the most part, this Committee should deal with broad questions of policy and practice and should work mainly to facilitate the schools' entry into and communication with all segments of the work and labor market. The second level would be represented by the smaller Occupational Advisory Committees with each offering counsel to the school administrators regarding instructional programs in specific trades, crafts,
and occupations. One such committee would be formed in conjunction with each job cluster around which vocational training is planned.

Support for Advisory Committees is also reflected in the attitudes of recognized vocational-technical experts. In commenting on his visits throughout the country, for example, Dr. Albert Riendeau, Special Assistant for Organizational Relations, U.S. Office of Education, stated, "The single ingredient which gives successful vocational-technical programs their greatest thrust is the appointment and vigorous participation of local advisory committees. Without them the best equipped and best staffed program will stutter to an ineffectual halt." He emphasized, however, that the work with such committees cannot be allowed to be an incidental part of an educator's major responsibility. Rather, since the effectiveness of the entire vocational-technical program could well be determined by both the quality and quantity of ties with advisory committees, the delegation of this function full-time to a single person would appear to be an extremely wise administrative decision.3

3Davis, op. cit.
EXPANDING THE USE OF PRESENT

VOCATIONAL-TECHNICAL FACILITIES

The use today of vocational-technical facilities of a large school district typically can be expanded tremendously if strong administrative steps are taken to ease the educational logistics that are involved. Perhaps the most disappointing picture on this part of the educational scene is the innumerable vocational-technical classrooms which lie silent and unused throughout the summer months. Those critics who decry the dollar waste reflected by ordinary classrooms which remain empty during the summer can properly point to a far more colossal loss of taxpayer investment when they can show an entire vocational-technical wing of a high school, crammed as it is with the most costly of all educational equipment, idle and useless for a full three months of every year. Never before have social, technological and educational forces converged so vigorously or so in unison to press for the development of full-fledged summer vocational-technical programs. With each summer finding the streets of American cities and towns filled with more and more teenagers unoccupied and unemployed, with indeed, the original purpose of a three month summer school vacation receding into our agrarian past, and with industry pleading for larger and larger numbers of technically trained workers, the reasons advanced by some in opposition to the summer use of vocational-technical facilities seem now to be altogether hollow and empty.
Most school districts have given too little attention during the regular school year to the problems of student scheduling and transportation as they touch upon the use of one school's vocational-technical facilities by students from other attendance areas of the district. The course of least administrative difficulty has been to permit students to enroll only in those vocational-technical programs offered at their respective high school. This policy, of course, works to prohibit students from availing themselves of other programs offered at other high schools. While in most instances it is not economically feasible for school districts to offer all vocational-technical programs at all of its high schools, it should be possible with flexible student scheduling and imaginative use of transportation resources to permit any student, regardless of his attendance area, to enroll in any of the district's training programs.

Though evening vocational-technical programs are now attracting larger numbers of adult students back to the high schools, many districts have policies which prevent regular day students from participating with them. This restriction seems to be rooted in a vague notion that the adolescent will not function well in such a group. There is, likewise, a companion attitude prevalent among some school administrators which prompts them to exclude adult students from the regular day schedule. The steadily mounting need to increase the vocational skills of the labor force is now so great that school officials can no longer be permitted the luxury of
maintaining such beliefs, especially when they are so little substantiated with facts. A largely overlooked advantage of mixing older and younger vocational students in both day and evening classes is that it more accurately mirrors the actual composition of the labor force with which each group must learn to deal. Additionally, the more mature and often more keenly motivated older student is frequently better able to convey the value of education and appropriate vocational training to his younger classmates than is the teacher or counselor.
SUMMARY

Although some indicators suggest that the proportion of high school dropouts is not on the increase, neither does this phenomenon appear to be decreasing. Clearly, the traditional American high school, with its typical emphasis on academic programs and on the college-bound student, stifles the interest and motivation of many of those who, as a consequence, elect to withdraw. Additional evidence indicates that a rich and varied vocational-technical program for many potential dropouts would rekindle their enthusiasm for school. Moreover, a significant proportion of those who complete their high school requirements and receive their diplomas report that they would have much preferred a much heavier vocational curriculum had but one been available.

As a means of not only increasing the holding power of the high school but, more importantly, as a means of making the years spent there of greater personal significance and lasting usefulness, it is recommended that a major vocational-technical component be woven into the fabric of the total public school curriculum. Such a component should be rooted in the earliest grades with carefully planned reviews of broad segments of the work-a-day world. Care should be taken to surround all useful work with an aura of approval and no labor which contributes to the welfare of society should be demeaned. A suggested format for presenting this was the one adopted by the Michigan Department of Education.
Among the modifications to traditional vocational-technical curricula recommended was the job cluster concept which aims at giving young people a broad introduction to an entire family of occupations, rather than concentrated training in single job specialties. Coupled with this new approach to vocational-technical education should come the inauguration of Occupational Guidance and Testing Centers created on a par with existing Counseling departments and charged with the multiple responsibilities of developing vocational-technical curricula, assessing student aptitudes and abilities, counseling for career selection, and working cooperatively with relevant members of the community.

Until such time that personnel trained in occupational guidance are emerging from graduate schools in greater numbers than is presently so, school counselors, on whom now mainly falls the task of vocational guidance, should be pressed into a vigorous program of on-the-job orientation. Such site visits to examine first-hand the job requirements set for various occupations into which counselors send young people should enlarge their sensitivities in a manner not possible merely through the study of work manuals and job specifications.

Through the appointment of local vocational-technical advisory committees training programs can periodically be altered to keep in tune with technological changes and, at the same time, the lines of communication between schools and employers can be kept open and clear. Finally, schools
must re-examine their vocational-technical facilities, often the most costly of all, seeking to increase their use both by numbers of students involved and the hours and months that they are in operation. This recommendation demands not only full summer programs, but extended evening classes as well. Necessary in this connection, also, is a solution to the vexing but not unsolvable problem of transporting students from one school to another to permit as wide an exposure to the different training programs as the total vocational offerings of the district will permit. And with this must come a determined effort to include more day students in evening adult classes, as well as a willingness to fill vacant places in the regular day classes with adults free to attend school at that time.
APPENDIX
### A Model for an Integrated Occupational Education Program

(MICHIGAN DEPARTMENT OF EDUCATION)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Elementary School</th>
<th>Early Secondary</th>
<th>Late Secondary</th>
<th>Post-Secondary</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>To develop an awareness of the occupational world.</td>
<td>To stimulate occupational interest and provide exploratory and pre-vocational experiences.</td>
<td>To provide training for a &quot;cluster&quot; of occupations.</td>
<td>To provide specific occupational education and training.</td>
<td>To provide occupational training, upgrading, and/or retraining.</td>
<td></td>
</tr>
</tbody>
</table>


| Number of Courses or Curricula | Integrated as part of total program. | Continue integrated program to provide separate courses which include experiences related to all fields of work. | 11-15 clusters | 20-50. Many offerings will be dependent upon local demand. | Many (20-50) number of offerings will be dependent upon demand. |

| Location of Instructional Facilities | Every elementary school. | Within every local junior and senior high school. | Local high schools and/or area centers. | Community colleges and state colleges and universities. | Local schools and/or area centers, community colleges and colleges and universities. |