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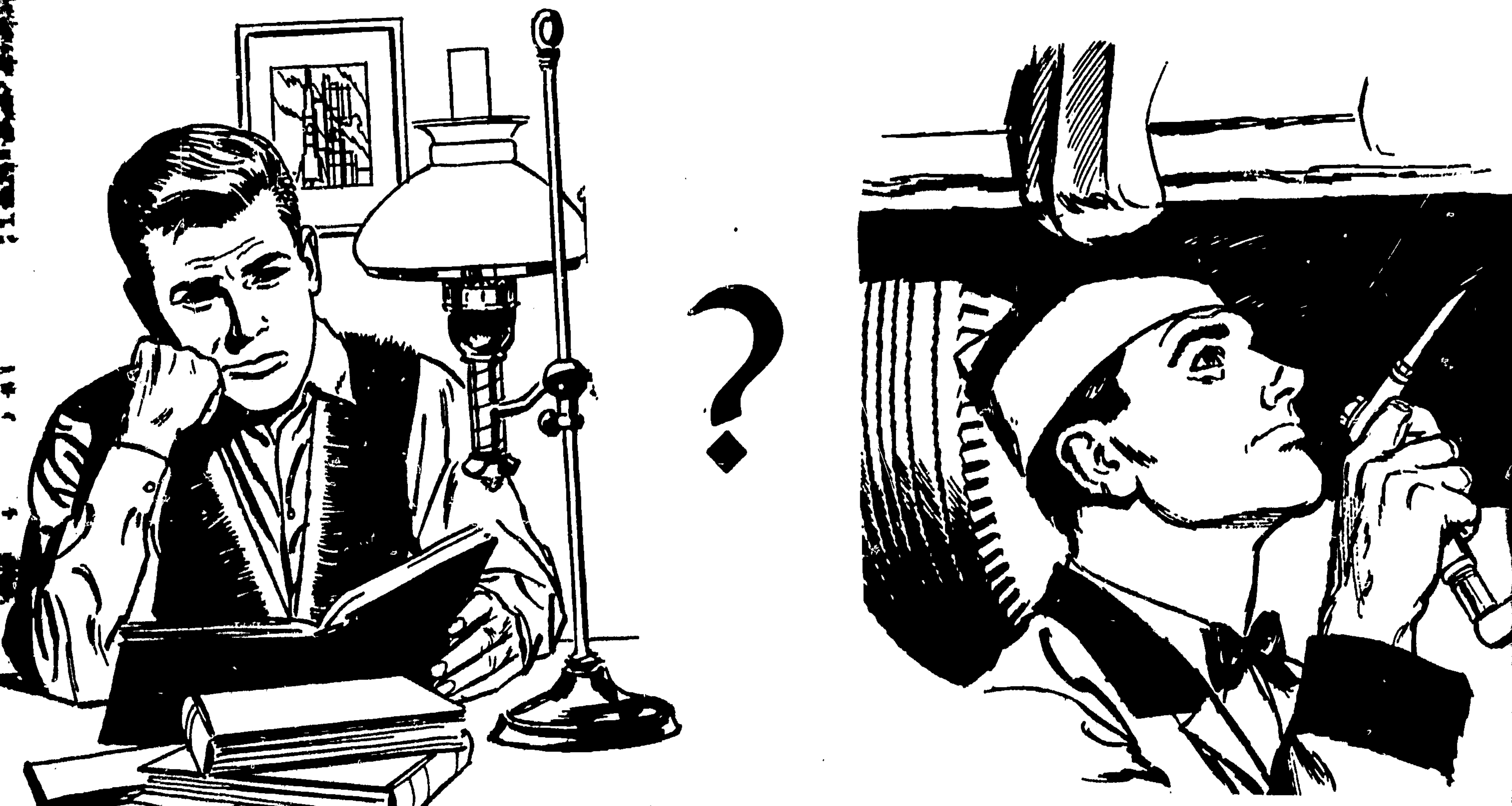
Excerpts from the most significant recent studies related to career development and vocational education are presented in four sections: Part I, Excerpts From Recent Publications, which includes the "Role of the Secondary Schools in Preparation of Youth for Employment" by Jacob J. Kaufman, et al and "A Rationale for Vocational-Technical Education and Its Implementation" by J.C. Swanson: Part II, Findings and Follow-Up Studies, with reported findings which relate to secondary schools and to junior colleges: Part III, Bibliography And Source Material, which cites specific publications identifying sources of relevant literature: and Part IV, The California Legislature on Vocational Education, a staff report on recent developments in vocational education in California. The findings, conclusions and recommendations included in this report, which was performed under ESEA Title III, should be of interest to administrators, educators, counselors, and researchers. (CH)

A survey of the literature on philosophies and approaches to Career Development

Edited by

Eugene E. Morris



NORTH BAY PACE CENTER

A SURVEY OF THE LITERATURE ON PHILOSOPHIES AND APPROACHES TO CAREER DEVELOPMENT

Edited by

Eugene E. Morris, Planning Associate

The work reported herein was conducted pursuant to an ESEA Title III Grant from the U.S. Office of Education, Department of Health, Education and Welfare

NORTH BAY PACE CENTER
Serving the Counties of
Marin, Napa, Solano and Sonoma

Office of Napa County Superintendent of Schools
Piercy C. Holliday, Superintendent
Napa, California

February, 1969

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The writing and punctuation style varies in the different sections of this report reflecting the styles in the original publications. The editor has not attempted to implement uniformity in this report.

PREFACE

Vocational education identifies that segment of the curricular offerings which seeks to prepare students for employment following graduation. Although the number of college enrollees and graduates continue to increase, the majority of the high school students will rely on skills derived from the secondary school program, as well as industry training programs, to gain initial entry-level employment. Is the educational system meeting this obvious challenge? A number of authors have assessed the educational environment and published their findings. The universality of their comments is self-evident.

Eugene E. Morris
Planning Associate

INTRODUCTION

The following report includes excerpts from the most significant recent studies related to career development and vocational education. The North Bay PACE Center has prepared this document to fill a void in the literature of any current summary or compilation of materials on this subject. The reader will be able to bring to bear on local problems the findings and authoritative opinions published elsewhere and reproduced herein.

The report is divided into four sections:

Part I: Excerpts From Recent Publications

Part II: Findings of Follow-Up Studies

Part III: Bibliography and Source Material

Part IV: The California Legislature Study on Vocational Education

This material can be used in four ways:

Information: All educators should be aware of the findings, conclusions and recommendations reported herein.

Build a library: Districts may wish to obtain, for professional libraries, copies of publications referred to in this report.

Conduct a study: The gaps in knowledge about the problems of vocationally oriented instruction within the North Bay Region are obvious. Districts may wish to utilize the services of the North Bay PACE Center in helping to fill some of these gaps.

Support a Proposal: This material can be used to help document and support plans and project proposals in career development.

To be effective, planning must be based on a thorough knowledge of the real and clearly delineated needs of both the student and of society. Many activities in the field of vocational education have been conducted primarily in response to societies' demands to "do something." Solutions have tended to attack only small segments of the problem and the impact has often been negligible. Knowledge of what has been tried, and the results of these efforts, can provide a springboard for more meaningful work on one of the nations most critical educational problems.

Additional copies of this report can be obtained from the North Bay PACE Center, 1005 Jefferson Street; Napa, California 94558.

Nelson C. Price
Director
North Bay PACE Center

PART I

EXCERPTS FROM RECENT

PUBLICATIONS

PART I

RELATING VOCATIONAL OFFERINGS TO STUDENT AND COMMUNITY NEEDS.

Kaufman, Jacob J., et al: The Role of the Secondary Schools in the Preparation of Youth for Employment. (Institute for Research on Human Resources), Pennsylvania State University, University Park, Pa., 1967.

This recent study was completed by the Institute for Research on Human Resources at the Pennsylvania State University. The study gathered data in nine communities from schools, teachers, employers, supervisors, seniors and graduates. The roles and attitudes of these persons in the employment of the secondary school graduate was analyzed in detail.

Some of the pertinent conclusions reached by the evaluation team are noted below:

1. Little relationship exists between the proportion of enrollment in various vocational programs and the occupational distribution in the communities.

2. Relationships between training and employment reported by the schools were much lower in a follow up study made by the Institute.

3. Vocational education programs were found adequate, but limited in breadth.

4. The graduates of the vocational curricula thought they were better trained than the academic or general curricula graduate. In addition, the vocational schools did a better job placing their graduates even though employers did not rate the training of the vocational graduate any higher than the others.

5. Students enrolled in vocational programs received inadequate guidance, borne out by the fact that only one-third of the graduates obtained jobs directly related to their training. The proportion of vocational graduates who recalled receiving adequate counselling was much smaller than that reported by academic graduates.

6. The image of vocational education amongst fellow academic teachers, employers, labor officials and the community was negative and pessimistic.

7. Employers rated personal characteristics such as initiative and conscientiousness as more important than vocational training.

8. Neither employers or union officials were able to discuss projected future skill or job needs in other than vague generalities.

9. The study encompassed special problem areas such as the minority groups and females. These groups were more likely to be counselled into vocational training based upon opinions as to jobs available to them rather than an area of vocational interest.

The main report discusses the issues and their analysis in great detail. The summary, conclusions, and implications are available in an abridged twenty page pamphlet. A copy of the recommendations follows.

RECOMMENDATIONS

Vocational Offerings and the Needs of Students and the Community

1. Secondary education should be reoriented to provide offerings of an occupational nature for those students who expect to obtain employment after graduation but who do not wish to commit themselves to one of the traditional vocational programs.

   This recommendation is based more on the potential of vocational education than on its actual present performance. At present, except for office occupations, low proportions of students are enrolled in vocational programs. These programs have little impact on the occupational needs of their communities. Yet the majority of students enter the labor market upon leaving high school. It is apparent that present programs have not been able to serve the needs of either the students or the communities.

   New programs should be devised that are comprised of occupational clusters and are taught by appropriately prepared teachers in work-oriented settings. These programs should provide opportunities for vocational exploration as well as for familiarizing students with the basic skills that are characteristic of the occupational clusters.

2. The special features of vocational education should be utilized to design programs for those students who cannot benefit from the current content of any of the three curricula.

   A substantial proportion of students in most high schools lack either the interest or the ability to profit from current offerings. These are often students from disadvantaged environments who lack verbal skills. The physical requirement of academic courses -- the necessity of sitting quietly for an hour at a time -- is incompatible with their life styles. They are prevented from taking traditional vocational programs by the ability requirement of these programs.

   The physical setting, freedom of movements, individualized instruction and stress on physical rather than verbal skills that characterize vocational programs seem to have a potential to motivate these students. The programs that are designed for them, however, should have a goal of occupational familiarization rather than skill attainment. The differences should be essentially of breadth rather than depth and of guidance rather than mastery of subject and skill. Eventual movement from these programs into the more specific, traditional vocational programs should be encouraged.

3. Substantial efforts should be expanded to enroll Negroes of average and above-average ability in the traditional vocational programs and to pursue

actively their subsequent placement in jobs utilizing the skills learned.

Employers, on the one hand, report they are being pressured to increase their number of Negro employees at every skill and occupational level. They assert larger number of Negroes are not already employed because of the limited number of qualified applicants. On the other hand, some vocational directors claim it is difficult to place their Negro graduates. Because of these obstacles, many Negroes are reluctant to prepare for occupations where Negroes are not normally employed.

Vocational educators should accept the challenge to break this cycle by preparing qualified applicants and by working with representatives of their communities to create the conditions necessary to assure their eventual employment.

4. A wider option of vocational preparation should be offered to female students.

The high enrollment in office occupations and the high precentage of graduates who obtain related jobs present a reassuring picture of the success of this program. It is less reassuring when it is noted that female graduates of academic and general curricula have much the same occupational experiences as vocational graduates. A more basic criticism, however, is the limited choice that is offered vocationally-oriented girls. The school system tells them, in effect, that they can prepare to be clerks and secretaries or receive no vocational preparation. And girls have been so conditioned by society that they believe these are the only types of jobs appropriate for them. It is well established that the distribution of abilities in the female population is comparable to that in the male population. The restricted vocational self-concepts of young girls coupled with the limited number of programs offered by the schools result in an inefficient allocation of the skills of females.

5. The reorientation of vocational offerings should be conducted without the constraint of the traditional organization of vocational programs.

The traditional areas of vocational education -- agriculture, trade and industrial, etc. -- result from their history and legislation. New approaches may require that programs be designed without being limited to these traditional areas. Planning in terms of these areas seems to have limited the ability of vocational educators to innovate and to have prevented them from trying different and creative programs.

6. Vocational educators should give consideration to the development of revised methods of instruction that will enable them to meet the needs of occupationally oriented youth more effectively.

Many experiments have been, and are being, conducted for the purpose of developing new methods for teaching youth preparing to enter the labor force after graduation. Such new methods include: new grouping patterns which recognize individual

differences among students; revision of curricula for the purpose of stressing student inquiry into basic concepts, principles and processes; and flexible scheduling procedures. These developments, in general, have been ignored by vocational educators.

The Administration of Vocational Education

7. The director of vocational education for a school system should hold an administrative position directly below the superintendent of schools.

   In many school systems the aims and objectives of vocational education have not been accepted. Vocational education is regarded as a service which is offered those students who do not fit into the usual curricula. As a result vocational expenditures are held to a minimum. A director who holds a position where he has the opportunity to influence educational policy increases the probability that adequate attention and resources will be directed to vocational education.

8. The director of vocational education should have sufficient staff so that his concern over the day-to-day operations of this program is limited and he can have the opportunity to develop new programs in relation to the changing needs of the community.

   A frequent criticism of vocational education, often raised in the main report, is that it has not adapted to changing conditions. If it is to adapt, someone must be sensitive to changes and plan to meet them. This is the function of the director. He should be anticipating the needs of his students and his community and should be planning programs to meet these needs. To do so he must be freed from some of the other demands of his time.

9. One member of the staff of the vocational director should be responsible for community relations. The person holding the position should be a specialist, and he should be given sufficient time to perform the function properly.

   Often, if community relations are specifically recognized, they are carried on in a hit-or-miss fashion by someone whose primary job is quite different. More typically, they are assumed to be an inherent part of the job of each teacher and coordinator. The usual outcome of these approaches is that community relations are neglected and the results are conditions such as those found in this study.

   To many teachers, employers, parents, and students the image of vocational education is that of a second-class education. This erroneous impression can be partially counteracted by providing recognition for occupational success and achievement through the use of the techniques of public relations. Since these techniques require skill and experience in their application, school systems cannot expect anyone to handle them. The responsibility should be assigned to a person who has both the ability and the time required to carry out the function. The results would probably include greater industry participation, up to date vocational programs,

higher rates of placement of graduates and the placement of graduates in the areas of their training.

The preparation of Vocational Teachers and Administrators.

10. Schools of education should train potential teachers and administrators in terms of understanding the conditions under which students learn rather than in terms of "how to teach." This would require a radical reorganization of teacher education programs.

    It is quite evident that a poor image of vocational education exists among many teachers in comprehensive high schools, particularly those who teach academic subjects. These negative attitudes reflect, to a large degree, the inadequate understanding of the environments out of which many youth come. The teaching process has failed to adapt itself to the needs of the students who live in these different environments.

    Teacher preparation should give future teachers and administrators a sensitivity to the effects of differing cultural backgrounds on the life styles of people. Along with this sensitivity, they should be prepared to adapt teaching styles to the needs of students from different backgrounds.

11. Educational administrators should become endowed with greater sensitivity and capability to understand and deal with the problems of providing various forms of education to prepare youth for employment.

    The preparation for the highest administrative levels in education must include knowledge and understanding of education for the world of work which will enable administrators to exercise appropriate and competent leadership. Graduate study designed for preparing school administrators must concern itself far more with proper philosophy, curriculum design and school structure for the large proportion of youth who do not continue their education immediately upon graduation. Although a new style of administrators can be eventually generated from restructured advanced degree programs, immediate steps should be taken to reorient the thinking of present administrators through a series of national and regional seminars and workshops designed to acquaint them with not only the problems of providing vocational education in all of its aspects at all of its levels but also the new methods for meeting these problems

The Use of Advisory Committees

12. All segments of society including business, industry, government and organized labor should play a more active role in the structure and execution of vocational offerings.

    The effective utilization of advisory committees is a difficult and time-consuming job. Although isolated examples to the contrary can be cited, in general, committees either do not exist or function in an ineffective manner.

The active participation of advisory committees holds much promise for improving vocational education. Contact with the employers of vocational graduates stimulates vocational educators to keep their offerings geared to the needs of the community. In turn, employers are more favorably disposed towards vocational education and give it more support and cooperation.

If this promise is to be realized, the schools must assume the responsibility to sti mulate active participation. They cannot expect the community to come to them. Nor can they simply ask for more cooperation. The schools must design the programs and make the effort necessary to have industry operationally involved in the educational process.

Vocational Guidance

13. To provide meaningful guidance to occupationally oriented youth, student counselors ratios should be made more realistic. Counselors who work with these students should be sensitive to their needs and should possess the skills necessary to serve them.

As a general rule, very little effective vocational counseling takes place in high school. In junior high school the counselor's role is to slot students into tracks --academic, vocational, or general. In the senior high school most of the counselor's time is spent with those seniors who plan to go on to college.

An evaluation of the effectiveness of vocational guidance was impossible because so little of it is being conducted. The need for vocational guidance and its apparent potential would seem to warrant increased effort. These efforts should be undertaken by counselors who are trained to work with non-college young people. Such counselors must be familiar with the psychological, sociological, and economic characteristics of these students, and must have sufficient knowledge of the occupational literature to guide vocational exploration.

14. Young women should be made aware, while still in high school, of the probable extent of their future vocational experience, and they should be trained to prepare for this.

Females in American society do not think in terms of long-range careers. At an increasing rate, women are remaining in, or re-entering, the labor market except for brief periods during their childbearing years. Despite this trend, young women are not as yet anticipating vocational careers. Most of the females who were interviewed had no real career plans. They regarded their post-high school employment as a necessary interval before they progressed on to their real roles of wife and mother.

Young women should be given the opportunity under careful guidance, to examine the occupational role of women in society. They should be informed that many married women with children still spend 30 to 40 years in the labor force. The skills necessary for women to anticipate and plan for changes in their vocational status should

be developed.

15. Vigorous efforts should be made to acquaint both Negroes and guidance counselors with the opportunities now open to Negroes in occupations where traditionally they have not been employed.

    Prevailing attitudes as to the types of occupations "appropriate" for Negroes must be counteracted. These attitudes limit the aspirations of Negroes and they limit the kinds of guidance Negroes receive. Proper guidance coupled with training and placement should silence the frequent claim that there are no qualified Negroes to hire.

16. Vocational orientation should begin in grade school to acquaint youngsters with the tasks and values of all types of occupations.

    Most young people of high school age have very limited occupational knowledge. Such information as they have is more often based on popular myths and stereotypes rather than on actual facts. In the absence of information, occupational decisions are either postponed until after high school or made because of identification with a particular social class. If a decision is made, it is typically tentative and it is often changed after the individual leaves school.

    To counteract this condition, the presentation of occupational information should begin on a systematic basis in grade school and continue on through junior high school In the lower grades this information should, of course, be broad and geared to the interest level of the students. In the later grades it should become increasingly specific. Care must be taken to assure the total occupational spectrum is presented with proper recognition of the value of all levels of work.

    A probable side effect of such a program would be an improvement in the popular image of vocational education. The undue emphasis on the necessity of a college education may also be counteracted.

Placement

17. The high school should assume the responsibility to establish a post-high school plan for each departing student. For those students who desire employment, the school should provide active assistance until they are placed in jobs.

    The evidence is ample, from this study and from many others, that the labor market operates in an inefficient manner. Informal sources are used far more frequently than the institutions organized to place workers. Young people frequently seem to take anything that comes along rather than seeking out jobs where they can find outlets for their interests and abilities.

    School officials should attempt to coordinate all the community organizations involved in the placement of workers. There are

some who think that this function could best be handled by guidance counselors. Their argument is that making counselors responsible for placement will produce an increased appreciation for the vocational problems of young people. Others contend that the placement task will hamper the efforts of counselors to assist young people in the process of vocational exploration. There is little evidence on either side, but it is known that if performance is measured by placement, efforts are put into placement.

Evaluation Through Follow-up of Graduates

18. Evaluation of the effectiveness of vocational education should be conducted in a more systematic manner. More comprehensive data should be gathered in follow-up surveys to provide feedback to modify current programs.

Vocational educators make a greater effort than any other group of educators to evaluate the effectiveness of their offerings through follow-up surveys. The major effort required in such surveys is in contacting the graduates. Unfortunately once this effort is made, often insufficient data are gathered. There is more to evaluation than determining the number of graduates who hold jobs that are related to their training.

Many of the questions raised in the main report could be answered if all educators would conduct comprehensive evaluations of the experiences of their graduates. To be effective, such evaluation should be conducted on a continuing basis. The relative payoffs of the different curricula and programs should be explored in relation to their costs. The results of such studies can provide the basis for effective educational planning.

The effectiveness of school training is most clearly seen in the first job held after graduation. In subsequent jobs it becomes more difficult to assess the relative influence of training and post-high school work experience. This consideration should not prevent schools from conducting more long-range evaluation at periods of five and ten years after graduation.

The Comprehensive or the Separate Vocational High School

19. On the issue of the comprehensive or the separate vocational high school no specific recommendation can be made.

The data from this study are not clear enough to support a firm recommendation for either the comprehensive or the separate vocational high school. The evidence that does exist, however, favors the separate school. It is suggested that the discussion be carried on with reference to real issues. A school is not more conducive to democratic values simply because all students are housed in the same building. Nor is a student better trained just because he has access to more modern equipment. What happens in that building and how well the student learns to use the equipment are more crucial variables. Evaluation requires that the substance of the operation, and not just its form, be examined.

VOCATIONAL EDUCATION - A "CRADLE TO GRAVE" CONCEPT.

Kishkunas, Louis J., "The Overhaul in Pittsburgh, " American Vocational Journal, p. 22 - 25, September 1968.

The Urban Revolution is perhaps the most dramatic force impinging on public education in the United States today. It has caused city schools to assess their programs with a view to creating a meaningful system that takes into account the opportunities available to graduates.

Early in 1962, the Board of Education of the School District of Pittsburgh began to question the suitability of their high school program in light of the above considerations. The city unemployment rate at that time approached 10 percent. For the goup 17 to 25 years of age, it was in excess of 20 percent; and for minority groups in that age bracket, it exceeded 30 percent.

The Board engaged the services of a research team and charged them with a threefold task: to investigate employment opportunities for students; to conduct selected follow-up studies; and to analyze the existing program of studies to determine if all elements which should affect high school programs were in consonance. When the report of this team was published in 1963, none of the elements seemed to mesh.

Only about 6 percent of the students were in courses classified as vocational. Students pursuing skill-centered goals in business education, home economics, distributive education, trade and industrial education, and industrial arts made up only about 20 percent of the student body. The great majority of students were pursuing either the academic diploma or its watered-down version, the general diploma.

Short-Changed. About 80 percent of the parents polled had aspirations for their children which required a college education. The students were more realistic in their ambitions - only about 70 percent planned to pursue a college degree. Even so, intentions did not match practice, only 28.8 percent of the graduates actually entered college and only a minority of these completed the baccalaureate program. In effect, the school system was geared to the needs of less than 15 percent of the student body.

In 1964, the Division of Occupational, Vocational, and Technical Education was formed and assigned the task of providing programs for up to 70 percent of the student body who probably would not attend college.

False Image. The popular image of Pittsburgh at the time was that the bulk of its work force was employed by the steel mills, the coal mines, and the railroads. The research team determined that the mines were either closed or had automated to a degree where the employment factor was negligible. The steel mills were rapidly modernizing and automating and/or relocating, and the railroads had moved most of their marshalling yards outside the city.

These once very potent employers were curtailing their activities to the point that they could no longer be counted on to absorb unskilled workers or those who possessed minimal skills. Moving in to replace them are new types of industries - industries demanding trained manpower.

Clearly a paradox existed. While unemployment rates soared, the demand for trained workers remained unfilled. Young people were caught in a squeeze play. The jobs they could fill no longer existed, and they did not have the skills to fill the jobs that were available.

In Pittsburgh at that time, five traditional vocational schools operated as part of the city school system. These four-year high schools were conducted on a "week about" schedule - students were in a laboratory setting for one week and in an academic setting the next. Twenty-six different trades were taught in this program which had been in existence since World War I.

Dead End. The image of the five schools was not of the brightest. Most parents viewed the vocational program as dead-end education. Unfortunately, this sentiment was echoed by many potential employers in the area.

"Buster is an excellent craftsman but we wish he were promotable. We wish he could write a memo of instruction. We wish he could read a handbook of instruction. We wish he could attend classes at the university so we could upgrade him in the hierarchy."

None of these alternatives were open to the typical graduate of the vocational system. For these and other reasons there were few members of minority races enrolled in the vocational schools.

On the one hand we found employers who expressed a desire to employ qualified Negro journeymen; on the other, we found Negroes either refusing to attend the vocational schools or being counseled away from them.

The patterns of achievement tests administered to vocational graduates tended to support the argument that education in the vocational schools was indeed inferior in terms of traditional academic measures.

Since the programs started in the ninth grade, students were forced to make vocational choices while still in the eighth grade. Counselors, teachers, parents, and even the students, tended to oppose early commitments which might cut off aspirations that went beyond the opportunities offered in the vocational schools.

Overhaul. Paradoxically, the solution to the task of furnishing meaningful programs to the majority of the high school population came with the phasing-out of the traditional vocational schools and the institution of new programs in the academic high schools - making them comprehensive in nature.

In January 1965, top administrators, selected principals, and guidance personnel met in a seminar to study the developments in skill-centered training related to the total school system. The report issued as an outgrowth of this seminar recommended that:

1. That comprehensive high school rather than separate vocational schools be the organizational arrangement for skill-centered training.

2. Job-centered training instead of starting at ninth grade be reserved for the eleventh and twelfth grades.

3. Readily identifiable potential dropouts be admitted to skill-centered training programs irrespective of grade level.

4. Required exploratory career programs for all pupils be made a part of the middle school curriculum (grades 6,7, and 8).

5. Ninth and tenth grade programs in industrial arts, business education, and home economics be exploratory in nature, leading to career selection in the eleventh grade.

6. Where appropriate, skill-centered training be extended to grades 13 and 14.

7. All programs lead to high school graduation.

8. Where appropriate, cooperative and work experience programs become an integral part of the total program.

9. Immediate, massive efforts be started toward curriculum development.

10. Efforts be initiated to build an inservice training program for teachers and all counselors and coordinators.

11. Information on these programs be given to the public via all media.

12. Studies be made on the modification and addition of facilities to house these programs in the existing junior and senior high schools.

13. Every effort be made to tap all financial resources to make these programs a reality at the earliest possible date.

Availability Assured. By September 1965, all high schools offered some of the 41 different programs as part of their regular curriculum. Obviously no school could house all programs, but availability was insured by permitting the student to transfer to another school, or if the desired program was offered in a neighboring school, to enroll as a part-time student.

To accommodate this change in organization and allow each program a block of time appropriate to its particular needs, it was necessary in many schools to extend the school day to nine periods. Some programs were allocated as few as two periods while others required as many as four - the mode being three periods.

It thus became possible for a student to meet minimum college entrance requirements and to develop a salable skill. In the first year of operation of the new Occupational, Vocational, and Technical Education Division, over 40 percent of the eleventh and twelfth graders were enrolled in the skill-centered programs. During 1966-67 this enrollment increased to 58.5 percent, and in 1967-68 it exceeded 60 percent. Thousands of other students were enrolled in general and exploratory courses.

Student Flow. The system adopted and now in the process of implementation, calls for elementary schools (K through 5) and middle schools (grades 6

through 8) feeding into comprehensive high school covering grades 9 through twelve. Post-high school programs (grades 13 and 14) offer training in selected technical skills. Currently there are 16 high schools in the system. This number will be reduced to five with the completion of a massive building program now under way.

The flow of students through the skill portions of this system is as follows:

Middle School: All students are required to take part in exploratory guidance or occupation-oriented experiences. Ten areas have been identified as representative of the occupational opportunities in the Pittsburgh area.

Industrial Arts	Manufacturing Construction Visual Communications Transportation
Home Economics	Foods Fabrics Personnel Development
Business Education	Business Communication Data Retrieval Distribution

The areas most closely allied to industrial arts have been implemented in most of the schools; pilot programs in home economics areas are underway in several schools; and curriculum and program development exercises are being conducted in areas related to business education.

Grades 9 and 10 (High School): Narrower and deeper exploratory programs are available to all students on an elective basis. These programs and laboratories closely resemble the traditional classes in industrial arts, home economics, and exploratory business education.

Grades 11 and 12 (High School) and Students over 16 years of age (Potential Dropouts); Student may elect skill-centered classes in over 60 skills. It is anticipated that these classeswill be attractive to the majority of students who are not college bound. Some students who aspire to a collegiate program can, by adding a period or two to their school day, pursue both goals - academic diploma and a salable skill.

Grades 11 and 12 (High School): Exploratory subjects in skill-centered areas will be available to all students on an elective basis. These programs are offered as supplements to other programs. For example, a pre-engineering student may elect an industrial arts program in drafting or a vocational drafting student may elect an industrial arts course in machine shop.

Grades 13 and 14 (Post-High School): Students who have completed two years of a "technical" subject may elect to remain in school after graduation to acquire the skills necessary to perform at a technician's level. Most of the technical programs offer up to two years of additional training.

Adults and Out-of-School Youth: In addition to the mainstream programs described above, meaningful programs are offered to adults who wish to gain skills for initial job entry and to those who want to upgrade their skills through extension education. Special programs in critical skill areas are available to unemployed and underemployed youth and adults through the Manpower Development and Training Act and the Pennsylvania State Retraining Act.

Essentials. Education as a "cradle to grave" proposition becomes a possibility through the evolving Pittsburgh system. The system demands flexibility of itself; hence the concept of a failure proof system becomes feasible. There are, however, several components of the system which we feel are essential to its success. They are as follows:

. The required exploratory experiences at the middle school level.

This feature makes it possible to accumulate guidance information valuable to both the school and the pupil. It also has the advantage of "building" the teacher into the guidance procedure.

. The delay of skill-centered training until the eleventh grade or age 16.

This delay tends to insure a certain amount of student maturity and gives the school and the student a chance to assemble occupational and guidance-oriented information. Vocational decisions are thus more firmly based.

. Vocational classes conducted in a comprehensive high school on a daily basis.

Several advantages accrue here: (1) the supporting academic program is carried on in classes where students pursue different goals, which tends to insure that the education will be of uniform quality and acceptable to post-high school institutions; and (2) aggressive and able students are in a position to pursue two goals: the academic diploma and a salable skill.

Recognition of several levels of preparation within a given occupation (service station mechanic, automotive mechanic, automatic transmission technician, etc.).

Flexibility on this point makes it possible to eliminate most screening devices which tend to exclude students. Emphasis is placed on including students, not excluding them.

. Recognition that preparation confined to the eleventh and twelfth grades is not sufficient for the more sophisticated technical skills.

The result has been the addition of grades 12 and 14 in several technical programs.

.The option to transfer or travel to another school if the home school does not offer the desired program.

The student who chooses to remain in his home school for the balance of his studies may pursue the desired courses at another school on a part-time basis. If the distance exceeds two miles, the Board of Education assumes the travel costs.

.Work experience in industry.

An attempt is made to integrate this experience into the student's school program as his competencies develop.

The Pittsburgh school system is fortunate in that much of the preliminary study had already been accomplished when the crisis in urban school systems began to take its present severe form. The commitment of the Board of Education and top administration, and the resources made available, have caused a general overhaul of the high school program.

The growth in enrollment in skill-centered courses has come as a direct result of these efforts. The massive building program underway will provide facilities to house the evolving program.

It is hope that through these exercises the concept of a failure proof "cradle to grave" school system will become fact.

THE EDUCATOR'S CHALLENGE

A columnist speaks up:

Sylvia Porter writing in the San Francisco Chronicle on November 25, 1968, summarizes the impact of the new Vocational Education Amendments.

Today, at least 25 million Americans should be receiving vocational training. Yet only 8 million are enrolled in vocational education courses, 4 million of them of high school age.

This translates into a vocational education gap of an awesome 17 million.

Today, only one of five high school students goes on to get a four-year college degree. Yet our high schools continue to center on the college-bound rather than on the overwhelming percentage who are bound for careers in the trades and technical professions.

This means we are failing to get to the heart of the problems of our city slums - for at this heart is the need for educating and training both younger and older Americans to fill the jobs which are and will open for them.

But it could be that the biggest boost for vocational education in our nation's history is hidden in the grab bag of 1968 Vocational Education Amendments. Like the profoundly significant Higher Education Amendments of 1968, the Vocational Education Amendments went on our statute books with a modicum of fanfare and even less public appreciation.

Nevertheless, into our laws have now gone a package of nine amendments to the Vocational Education Act of 1963 which, in the words of a spokesman for the United States Office of Education, "could put vocational education for both youths and adults on the map. We've never had any thing like this to work with before." To indicate the scope, here are some key provisions:

A new authorization of $40 million to be distributed to the states for special programs aimed at helping disadvantaged students, primarily from big city slums and other poverty areas.

New funds specifically earmarked for vocational education programs in the public high school system for students who are physically, emotionally or mentally handicapped.

New sums - $15 million this year, more later - to finance "exemplary" experimental vocational programs to disseminate the findings of such programs throughout the nation. Examples might include job training programs for prisoners, excellent area vocational schools serving whole states or regions, effective programs for training vocational counselors.

An authorization of $40 million to help launch a network of vocational boarding schools as part of the regular public school system. This intriguing plan, designed in part to remove disadvantaged youngsters in the 15 to 21 age group from their depressing, distracting home environments, was first authorized under the 1963 Vocational Education Act. Congress failed to appropriate money for the program, but the concept is as

facinating today as it was five years ago.

An authorization of $25 million beginning in fiscal 1970, for consumer education programs for both high school students and adults, especially in economically depressed areas. This will be the Federal Government's first major, direct financial involvement in vital consumer education programs.

And - possibly the most important single provision - authorization of $25 million during the current fiscal year to train desperately needed vocational education teachers, particularly in today's new technologies.

CRITERIA FOR EFFECTIVE VOCATIONAL EDUCATION

Swanson, J. C., " A Rationale for Vocational-Technical Education and its Implementation" (University of California) Berkeley, California, 1963.

> "Ignorance and illiteracy, unskilled workers and school dropouts...breed failures in our social and economic system. The loss of only one year's income due to unemployment is more than the total cost of twelve years of education through high school. Failure to improve educational performance is thus not only poor social policy, it is poor economics." 1/

A number of forces in our society are focussing attention on vocational education and its place in today's world. Education is attempting to find a better way to serve all youth in our country. There is considerable evidence that a large per cent of youth need education specifically for employment.

Social agencies and their leaders are searching for greater stabilization of the family. They are sure that the ability of the father to get and hold a job can be a major factor in producing a better home. They are asking, what part can education for employment play in helping with this problem?

Economists are concerned with human capital and how education can be more effective in developing citizens to be more productive of valuable products and useful services.

Political scientists are aware of the value of economic production, social stability and the services of government to its citizens as a means of stability for a nation.

All of these concerns focus attention on vocational education. People are not born with the skills and knowledge to produce valuable products and perform useful services. It is necessary for a society to maintain a program of education to make effective and efficient citizens. Research and extensive experience have indicated that vocational education can make persons employable and be an investment of a society rather than a cost to society. This economic value however is not realized unless vocational education accept certain basic criteria and maintain certain standards.

Definition of Vocational-Technical Education

The definition of vocational education is not standard in all parts of our country. The definition used in this paper is the most widely used definition and conforms to the usage in federal laws. Vocational Education is that part of the educational spectrum which provides skills and knowledge for a specific employment opportunity. The term generally is not used to include education for the professions, (law, medicine, teaching, etc.) which require a college degree program. The term vocational-technical education is often used synonymously with vocational education. It is used usually to emphasize that vocational education does include training

1/ John F. Kennedy, "Message to the U.S. Congress", January 31, 1963, Washington Post, Washington, D. C.

for occupations which require extensive mathematical and scientific knowledge and skills.

Criteria for Effective Vocational-Technical Education

1. EFFECTIVE VOCATIONAL EDUCATION REQUIRES A STUDENT WHO IS LITERATE AND MOTIVATED TO BE A GOOD CITIZEN.

   The elementary and secondary schools of a nation are the foundation on which vocational education must build. Reading, writing and competency in arithmetic is essential for any significant employment. Practical arts should be a part of these programs and should be effective as pre-vocational education. These factors should not be interpreted to mean that all elementary and secondary education is vocational.

2. VOCATIONAL EDUCATION SHOULD BE AVAILABLE TO YOUTH AND ADULTS WHO ARE MOTIVATED TO SPEND FULL TIME IN LEARNING SKILLS FOR AN EMPLOYMENT OPPORTUNITY.

   Vocational education usually requires a full-day activity for an extensive period. It is usually for persons who have not been employed and are thus from 16 to 25 years of age. Shop experiences, industrial arts or practical arts as it is often designated, is often provided to younger persons but is usually too general to be truly vocational.

3. VOCATIONAL-TECHNICAL EDUCATION SHOULD BE AVAILABLE ALSO TO YOUTH AND ADULTS WHO ARE OR HAVE BEEN AT WORK BUT ARE MOTIVATED TO UPDATE OR UPGRADE THEIR PRESENT OCCUPATIONAL SKILLS OR TO LEARN NEW SKILLS AND EXTENDED KNOWLEDGE.

   Mechanization and automation are creating the need for many new skills and much more extensive knowledge. The same changes are making many present skills obsolete. Education programs to serve these persons are usually part-time or short-term courses of study. They normally do not lead to a diploma and often cannot require any admission standards except the ability to benefit from the instruction.

   Studies in vocational education indicate that instruction for these persons produce more immediate and more efficient economic returns than any other type of vocational education.

4. VOCATIONAL EDUCATION PROGRAMS MUST DEVELOP AND MAINTAIN INPUT STANDARDS.

   Probably the greatest fallacy of vocational education is that no standards are possible or necessary. Very often students who have been failures in all other educational activities are placed in vocational programs. No vocational instruction can be effective unless the students, the teachers, the equipment and the instruction materials meet certain standards. These standards must be related to the objectives of the programs of instruction. These reults cannot be effective if any of these elements have standards too low. The results cannot be effective if any of these elements maintain standards too high. A general outline for input standards follows:

   a. The student must have the aptitude, the ability and the motivation necessary to succeed in the program to which he is assigned.

b. The teacher must have extensive training and experience in the occupation of technology which he teaches. (Very little compromise can be made in the skills of the teacher if effective instruction is to take place.)

c. The equipment and supplies must be similar to the equipment and supplies to be used by the student when he is employed. It must be available in sufficient quantities to permit extensive use by the student during his period of instruction.

d. Instruction materials such as textbooks, operating manuals, job sheets, etc., must be organized in a manner to give an adequate curriculum for the specific program of instruction.

5. VOCATIONAL EDUCATION MUST DEVELOP AND MAINTAIN OUTPUT STANDARDS.

These standards must be related to the objectives of the particular program of studies.

Vocational education is a very diversified educational activity. It includes many skills and extensive knowledge directed toward many occupations at many levels of performance. The objective of one program may be to train persons to change and repair automobile tires. The output standards would be quite different for the automotive mechanic who is trained to diagnose and repair troubles in complex automatic transmissions. If one considers such diverse occupations as food service, office occupations, medical technologies and electronic technicians they can understand the great scope of vocational instruction. Each program must have its unique standards.

In general the output standards of vocational instruction must be measured by performance tests.

6. THE CONTENT OF VOCATIONAL PROGRAMS MUST BE REALISTICALLY RELATED TO THE REQUIREMENTS OF THE LABOR MARKET.

Vocational education has very little, if any, value to the individual or to the economy unless the skills which are learned enable a person to get and hold a job. The student must be able and willing to perform services and produce products which are in demand in the labor market.

7. THE NUMBER OF PERSONS IN TRAINING MUST BE RELATED TO THE NUMBER OF PERSONS WHO WILL BE NEEDED BY BUSINESS, INDUSTRY, COMMERCE AND GOVERNMENT.

Competition for available jobs which leave some persons unemployed is an economic loss to the state and may result in severe suffering to some persons and their families.

Since the number of jobs requiring any specific set of skills may change, and the type of skill may change, vocational education must recognize obsolesence. Instruction programs may have to be abandoned and new programs developed.

8. VOCATIONAL EDUCATION MUST INVOLVE BUSINESS, LABOR, INDUSTRY AND GOVERNMENT AS WELL AS SCHOOLS.

It becomes obvious from the above criteria that schools alone cannot perform efficient and effective vocation education services without the close cooperation of other agencies.

There are severe problems in implementing or following these criteria. The effectiveness of a vocational-technical education program will depend largely upon the extent to which these criteria can be followed and their related problems overcome. Some of the most common problems might be stated as follows:

1. The faculty and administration of secondary schools are with very few exceptions persons who have had extensive training and experience in academic activities but very little experience in the world of work. They, therefore, are inclined to plan and operate school programs without effective activities for other than academically oriented students. It is quite difficult for faculty and administration to overcome this condition, for colleges and universities, businesses and government, labor and management provide few or no opportunities to develop expertise for operating effective vocational programs.

2. Labor market information is not generally available in a form whereby schools can make decisions with surety concerning course content and numbers to be trained for specific employment opportunities. The state employment services, however, are developing better information and there are employment needs which can justify these programs.

3. It is difficult for a school to know enough about a student to advise him to enter a specific vocational program. Better testing and record keeping procedures are making guidance and counseling more effective. Probably the most important activity is attention in the curriculum in the elementary grades and the junior high school years to develop a "readiness" for vocational decisions.

4. A major factor in relation to operating vocational programs is often described as the "image" of vocational education. Situations could be described where well-equipped labor market-related and well-taught courses were abandoned because no students were available. This situation usually exists where parents, students, teachers and often the public look upon vocational education as an educational activity for "second-class" citizens. Many instances could be cited where (a) teachers were adamant in advising all youth with an above-average academic aptitude to not go into vocational programs, (b) parents show an interest in vocational education in their local school but a vehement stand against their own child being a vocational student, and (c) culturally different groups taking a strong stand against any of their group being advised to enroll in vocational programs.

5. The difficulty in developing or purchasing curricula materials is severe There is normally a great variety of texts and reference materials for high school subjects; this is not true for most vocational subjects. It is an even more serious problem for vocational subjects because often the teachers are taken directly from business and industry and they have not had experience or training as a teacher.

A new type of vocational-technical center is developing rapidly in many states in the form of an area school containing shops and laboratories serving the needs

of students of several smaller constituent high schools. In this arrangement, students retain their enrollment and receive general education instruction in their "home" high schools. They alternate their attendance beween their home high school and the area occupational training school in a cooperative arrangement so as to receive both occupational training and academic studies. Varying periods of alternation are used from one half-day to a one or two-week period. Students meet all high school requirements and receive a high school diploma from the home high school plus a certificate attesting to completion of an occupational training program. This kind of school is adaptable for either rural or urban areas. There is considerable misunderstanding among casual observers of this growing vocational education service, causing it to be labeled by some as a separate school system. The fact is that these schools are established and operated under newer and sometimes unique legal provisions with the on-going local and state public education systems.

A trend toward coordinating or integrating general education and vocational education more effectively in the high school is progessing rapidly. The gist of this effort is to place greater emphasis at an earlier age on meaningful information about the world of work, occupational exploration, work experiences, and closer coordination between the communication skills, mathematics, physical science and social studies with the occupational skill training. Newer emphasis is being placed on education in interpersonal relationships and problem-solving approaches and techniques. The latter are intended to equip youth to make adaptations to the rapidly changing job requirements in the labor force. Valuable research and experimental efforts in behalf of these newer goals is already underway and will, no doubt, progress rapidly as additional funds and resources are applied.

Vocational education is very important. The problems related to making youth employable by school experiences must be solved. The history of vocational education for the past fifty years provides many guidelines for success in this endeavor--and many pitfalls to avoid.

LONG RANGE PHILOSOPHY FOR VOCATIONAL EDUCATION

_____, "Changing the Context in which Occupational Education Takes Place" (Committee Report - Ad Hoc Committee on Vocational-Technical Education), Salt Lake City, Utah. December 1967.

A Report By The Task Force on Vocational-Technical Education To The Education Commission of the States, With Proposals for Consideration By Each of the Fifty States

PART I. WE BELIEVE--

1. Public education exists for all the people. Public schools have become a vital link to progress and indeed the very existence of our democratic society.

2. The achievements of Americas' public schools over the past hundred years have developed potential for creativity in our society that have brought us to the threshold of a new era in which the possibilities for greatness will be limitless.

3. In this last half of the 20th Century, educated people and the technology they have fostered, have given this nation a margin of choice which must be used wisely if a society of free men is to endure.

4. The schools are responsible for educating and preparing individuals for full participation in the economic life of American society; thus, the schools have a major responsibility in the field of manpower development.

PART II. WE OBSERVE--

1. "Education for <u>all</u>" has become a reality; but the formal classroom setting which does not motivate nor serve all the people is still the primary environment for public education. The community, with all its resources, must also be involved as a context in which learning takes place.

2. Generally, education for work life is not treated equally nor simultaneously with education in the intellectual, cultural, social and political areas of human endeavor.

3. A plethora of educational programs, often poorly related to each other or to "real life", points up the need for strong state leadership in master planning and coordination. The resources unique to each state must be mobilized to provide each individual sufficient numbers and kinds of learning experiences to prepare him to meet society's ever-changing demands.

PART III. WE PROPOSE--

1. That a <u>Human Resources Council</u> be established in each state.

   The membership would consist of heads of those departments of state government that each state deemed appropriate, plus key lay citizens.

The Chief State School Officer may serve as Executive Secretary.

The Council's responsibility would be to develop long-range goals (this might be referred to as a "Bill of Educational Rights and Public Responsibilities") with a view toward adding the community context for education to the present "school" context and relating the two.

THE FOLLOWING PRINCIPLES MAY GUIDE THE COUNCIL AS IT LEADS IN SETTING THE STATES' EDUCATIONAL GOALS:

A. Priority. Education should be given first priority in the allocation of human and material resources.

B. Community Involvement. Education should be extended outward from the school to the entire community. Citizens can be involved as advisors on policy and programs, as tutors in and out of "school," as resource persons, and as students themselves.

C. Extension of School Day and School Year. Schools, as resource centers for learning for students of all ages, should operate from 8a.m. to midnight every week of the year.

D. Flexible Termination, Reentry, and Advancement. The formal school-leaving age should be made flexible so that the individual, as he reaches the maturity to either go on to college or a job, may do so with the assurance that pursuit of a liberal education can continue along with career development, throughout life. Both dropouts and graduates whose skills become obsolete could be welcomed back into this kind of system to take up where they once left off, without fear of new failure.

E. Individualization of Instruction. No limitations or inhibitions should be place summarily on learning because of age, ability, or other factors--rather, learning experiences should be planned to meet the needs of the individual.

F. Followup and Feedback. Effectiveness of educational programs should be continuously evaluated through a followup of all students for an indefinite period and securing feedback on how well the programs are serving their consumers. Such information can be used for program redevelopment and improvement as well as for continual escalation of individual skills.

The Council would establish and coordinate the work of state-level commissions which would concentrate upon bringing contextual reform to education in each of the following areas: occupational, social, cultural, political, and intellectual--beginning with occupational.

2. That an Occupational Education Commission be established in each state, with counterparts in Local Community Advisory Councils. 1/

The Commission would be a top-level group, broadly representative, including members from labor and management in the private sector, as well as from public service. The State Vocational Education Director may serve as Executive Secretary. The Commission would have a full-time professional and clerical staff.

The Commission's responsibility would be to provide leadership and stimulate development of vocational-technical education programs designed to achieve the goals defined in cooperation with the Human Resources Council, with attention to such factors as:

Existing vocational-technical programs in the state upon which improved programs can be built.

Size and ecological characteristics of the communities in the state--metropolitan, urban-rural, and rural.

Identification of individual dropouts and potential dropouts as well as unemployed and underemployed adults. With this group, specific training and job entry is of key importance. This should be the target population for initial efforts in contextual reform; then the identified "passive" youngsters, and ultimately all the youngsters and adults who can benefit.

Through its counterparts, the Local Community Advisory Councils on Vocational-Technical Education, the Commission would cooperate with local and intermediate school districts and lay citizens to:

Survey human resources--state, institutional, group, and individual.

Identify, establish, and staff "learning stations" in order to induct youth and adults into programs including, but not limited to, "school."

Develop exploratory and tryout experiences, extend the school day and year, provide for flexible termination and reentry, identify and prepare lay instructors, and develop new curricula.

Provide, in cooperation with business, industry, and other agencies, for followup and placement of students.

3. That a Manpower Coordinating Committee be established in each state.

The composition of the Committee should provide for high-level representation of labor and management, and of the appropriate state agencies.

1/ Each state now has a Vocational Education Advisory Council established under Public Law 88-210. The Occupational Education Commission could be the same body, or a reconstituted body, and be asked to assume the responsibilities set forth in this section of the report.

The Committee's responsibility would be to effect maximum system-cost effectiveness in the utilization of the various occupational and job training programs.

The Committee's primary function should be coordinative rather than administrative, with the actual implementation of the education and training programs being the responsibility of the appropriate agency.

A state may elect to have this Committee operate as a subcommittee of the Occupational Education Commission, or separately, with close working relationships with the Commission.

4. That each state consider the establishment of a Task Force for Occupational Education and Economic Development.

This Task Force would draw specialists from appropriate existing state agencies (including the Department or Division of Economic Development), labor, mangement, and the new groups proposed above.

The responsibility of the Task Force would be to help build up the state's industrial output through new or expanded industries. This would be done by means of providing information to assist industries in considering the state as a site, providing a pool of trained workers, and/or making available undeveloped (or underdeveloped) workers who can be trained for jobs provided by new industries.

A state may want to consider this kind of special occupational education service if it seems likely that through its use the income of the state could be substantially increased. The Task Force could operate as a subcommittee of the Occupational Education Commission, or separately.

5. That Regional Learning Centers be established in each state in Intermediate Education District or County School Offices or other regional educational organizations in the state.

The Centers would be staffed with student-personnel specialists who would work with sociologists, psychologists, economists, and cultural and political leaders to synthesize educational planning for the region. The Local Community Advisory Councils described in Proposal No.2 above would work closely with the Centers.

The responsibility of the Centers would be to provide leadership in development of broad, interdisciplinary curricula that are responsive to the needs of society and the individual and geared to the resources of the region.

The results of this planning would be used by counselors in diagnosis and prognosis for individual learners, and by master teachers in planning complementary educational experiences in specific fields.

"PROBLEMS IN THE TRANSITION FROM HIGH SCHOOL TO WORK"

Research Series #20 (The Center for Vocational and Technical Education) Columbus, Ohio, October 1967.

High unemployment rates document the fact that many youth experience difficulty in transition from school to work. This is becoming a national concern.

A study was designed to determine the major impediments faced by youth in transition, and what could be done by schools to improve the situation. Vocational educators in selected cities were interviewed and their responses were tabulated.

It was found that youth have unrealistic aspirations and expectations as to the requirements and rewards of their initial jobs.

Poor attitudes toward work and working, lack of responsibility, maturity, and self-discipline, and lack of knowledge of the real demands of the work, were each reported by more than 40 percent of the sample to be the attitudinal and behavioral manifestations which typify youths who incur difficulty adjusting to the work regime. The specific problem of "lack of responsibility, maturity, and self-discipline" was also rated the most important, and second most important obstacle faced by youth in the transition from school to work.

Many of these attitudes and behavioral patterns exist because youths have not had the opportunity to learn and inculcate the values which are requisites for occupational adjustment. Youths do not immediately become "adults" upon assuming a position in an economic organization. Learning new roles and expectations involves practice and orientation to the new, before replacement of the old can occur. Many educational programs do not permit youths to practice, or to assimilate those qualities that enhance their status in the adult work complex.

Nearly one-third of the educators detailed specific problems in personality, behavior, and socio-cultural factors that hinder a smooth, facile adoption of a work ethos. They mentioned youths' lack of future orientation, describing a hedonistic type of adolescent who has poorly defined goals. They describe some youths as lacking initiative, motivation and self-confidence. They reported that in a work situation, the youth experiences problems of understanding and adapting to the demands of his job. He has poor work habits and is frequently tardy or absent. According to the respondents, many youths also lack respect for their superiors, and are unwilling and/or unable to follow directions and accept criticism.

Although vocational educators indicated that the major impediments to a successful transition are intrinsic to youth (e.g., their unrealistic aspirations, expectations and goals), the disinterested attitudes of youthful males towards work may also be partly due to the instability and insecurity of their work status as potential draftees. They are the temporary "Misfits" of our society. The lack of motivations, self-confidence and initiative is not a problem to be placed solely upon the shoulders of youth; it has been fostered and precipitated by the society and educational system of which they are a part.

The respondents' sparse listing of suggested curriculum aids may be construed as indicative of the lack of concern or emphasis being placed upon the affective

domain, as it relates to vocational educational objectives. Some schools do not have adequate facilities, equipment, or personnel with which to develop those values and attitudes that facilitate a transition to work. Approximately 50 percent of the respondents mentioned the inadequacy of their "School Programs and Services," as being conducive to worker adjustment problems.

Nevertheless, a vast majority of youths do finish high school and many will proceed to college; they generally develop some skills and abilities which enable them to compete in the complex labor market. Despite the statement that adolescents grow up in an "absurd" manner, and are part of a "vanishing adolescent" cultural phase, many eventually internalize middle-class work values and adjust to an adult work ethic. But the youths who do encounter difficulty in adjustment denote the need for certain curriculum changes. Emphasis should not be on long term goals or future oriented programs, but on needs-satisfaction and on the immediate and immediate-future benefits that are perceivable to youth. Perception precedes involvement; prior to personal involvement in any new process, idea, or product, youths have certain perceptions of the values, needs and rewards they hope to incur. If perceptions instigate desires and encourage goal-seeking behavior, then involvement will be the result. The alienated school youth is an example of negative perceptions towards the goals of school and society; the reaction is non-involvement.

School administrators, counselors and teachers must constantly evaluate their goals and methods to ascertain that they are not encouraging rigidity and conformity to cultural and occupational sterotypes. Curricula must permit individual differences and societal changes to be incorporated as a foundation for the determination of educational objectives. If cognition of basic skills and technology becomes the main function of educators, then youth will continue to enter an adult society half prepared for adequate, meaningful and productive living. By integrating the proper attitudes and values, as well as skills, into the curriculum, youth's transition from school to work can be made less problematic.

CONSIDER ALL POSSIBLE CAUSES OF
FAILURE IN THE WORLD OF EMPLOYMENT.

_____, "Fault Tree Analysis" (Alameda County, Title III PACE Center), Hayward, California, 1968

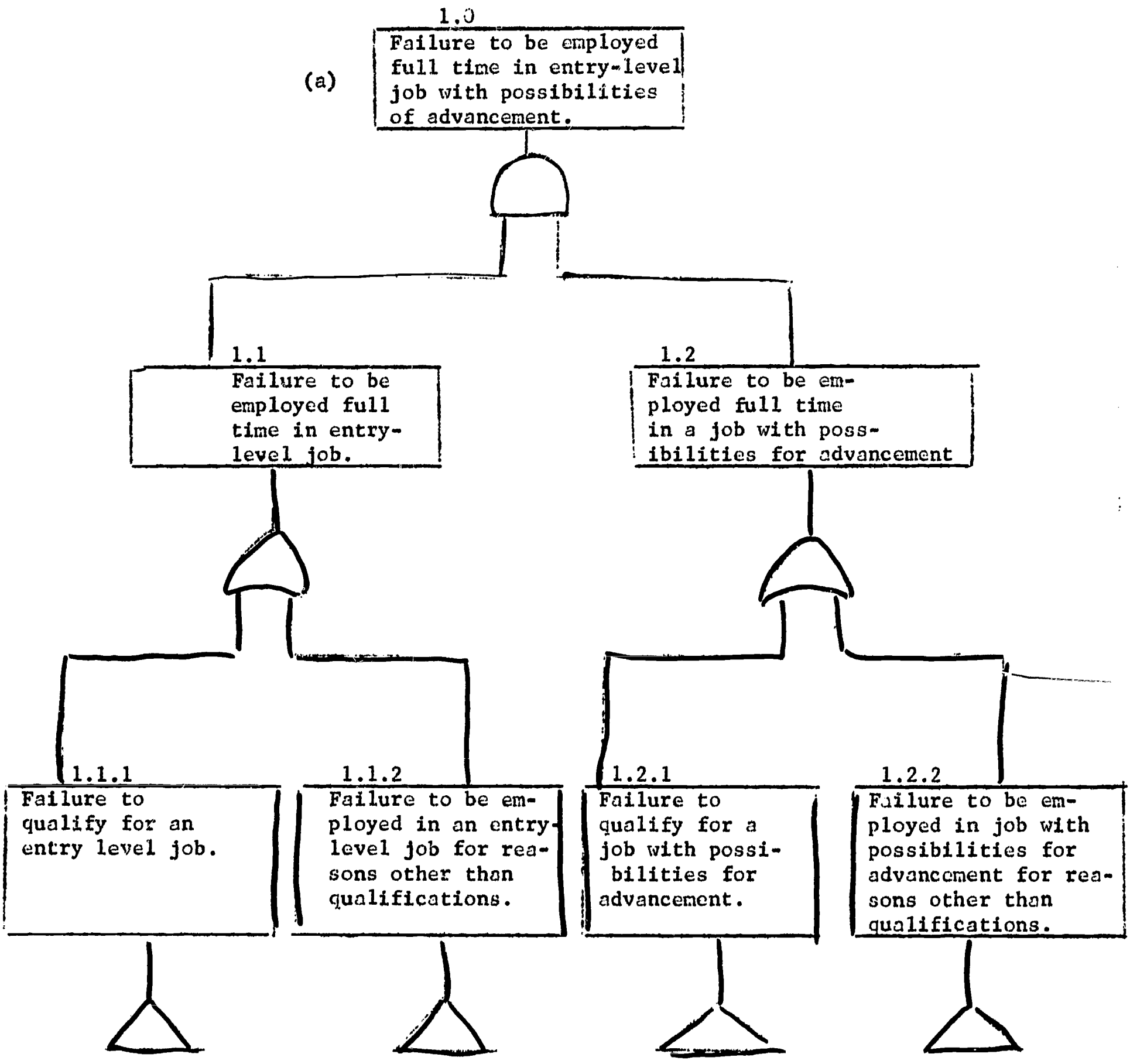
This report details a fault tree analysis of "Preparation for the world of work." It uses the systems approach to define the problem areas that inhibit a student from obtaining and holding a satisfactory job.

The report illustrates a means of problem definition and provides a detailed review on the use of the fault tree analysis for problem definition. It does not attempt to provide solutions to the problem.

A sample of a minute part of the analysis is included as Attachment I.

Attachment I.

SAMPLE - FAULT TREE ANALYSIS



The tree above should be read thus: The failure in box 1.0 can be caused only by the coexistence of events 1.1 and 1.2. Event 1.1 can be caused either by event 1.1.1 or event 1.1.2. Similarly, event 1.2 can be caused either by event 1.2.1 or by event 1.2.2. Alternate (a) was discarded because it developed that, with a few exceptions, most failure modes related to both sides of the tree. In effect, the two branches were the same, not different, subsystems of the system.

--NATIONAL TRENDS IN VOCATIONAL EDUCATION

U. S. Government, New Directions in Vocational Education, (U. S. Government Printing Office), Washington, D.C., 1967

1. "Instead of a nebulous curriculum with a lot of pedantic objectives, we want the disciplines to grow out of solid, practical applications. We try always to imagine the student asking, 'Why do we have to learn this?' If the teacher can only answer, 'Well, this is good education,' we say forget it. But we know we're on solid ground if a teacher of an academic subject can say, 'You're going to learn this because tomorrow we're going to do such-and-such a project. If you don't understand this today, you won't be able to do that tomorrow.' As much as possible, we want classroom work to be a bunch of building blocks." (page 2)

2. "About 15 percent of high school students around here go to college," Mr. Jones points out, "but the full 100 percent are taking academic courses. In preparation for what? The 85 percent who don't go to college finally graduate unprepared for anything else. What do they do? They go to work in grocery stores, service stations, or maybe in one of the mills around here, as a tender on a simple machine. They're 18 or 19 years old. By the time they're 21 or 22 they get married, and first thing you know they have a child. They begin to realize the value of a paycheck that keeps growing. That's when they come to us ready to learn something. A lot of the students we get are young people who've been out of school a year or two and are finding out for the first time what they want an education for."

   "One of the first things we find out is that they don't know much math. They spent a couple of years on algebra in high school, but because they knew they weren't going to college and because they didn't see any other use for it, they didn't learn it. Practically every course we have has math in it. So we have to pump a lot of math into them. But we relate math directly to practical work. Because it has real meaning, they learn it." (page 20)

3. A few years ago, a State report on vocational education pointed out that only 20 percent of high school graduates entered college with enough serious commitment to finish, although the overwhelming effort of public schools was directed at college preparation. Quincy school officials were shaken by the implications of this study, and they decided to check it out locally. They found their record a little better, but not much better. Less than 30 percent of their graduates were completing college.

   "We found," recalls Maurice J. Daly, assistant superintendent for vocational education, "that we were spending about 75 percent of our budget on a kind of education that was designed for a small portion of our young people. What were we doing for the others? Quincy High School, for example, had an enrollment of 1,700. Only about 300 were taking vocational courses. Well, it wasn't hard to see that our curriculum was not in line with the needs of the students."

"First thing we did was organize an Educational Policies Committee made up of Superintendent Pruitt, the three assistant superintendents, the director of guidance, the president of Quincy Junior College, our two high school principals, and our consultant for secondary education. We didn't talk about a new building or new equipment, or anything like that. We asked ourselves, 'What should education be doing for our young people?' We decided, yes, we want a good strong college preparatory program. But, in addition to that, we need an equally strong vocational-technical program. The simple thesis we came up with was that no student should leave secondary school without a salable skill."

"Then we set out to analyze the realities of employment in our area. From the city clerk we got a copy of a local census listing all people over 21 by name, address, and specific occupation--carpenter, sheet metal worker, or whatever. We found that 9 or 10 percent of our citizens are professionals, and 35 percent of all our working population are in trade and industrial jobs. A large remaining number are in service occupations--culinary arts, health services, distribution, transportation, and offices. All this told us something important that we hadn't paid much attention to before. About one-third of our total high school population ought to be preparing for trade and industrial pursuits and a large number for specific service occupations for which there is an immediate demand." (page 50)

4. Training for occupations in the "family" groups

Project ABLE soon identified 11 broad vocational families: business education, computer data processing, electrical-electronics, food preparation, general piping, general woodworking, graphic and commercial arts, health occupations, home economics, metals and machines, and power mechanics.

"Traditionally, in vocational education," says Mr. Daly, "a boy or girl would train for a single, specific occupation. A boy might choose to be a sheet-metal worker. He'd train for 3 or 4 years and then go out and be employed as a sheet-metal worker. Now, that was fine when technological changes came slowly. But today, who knows how they'll be cutting metal 5 years from now. Maybe they'll be doing it with laser beams.

Beyond that, he can go into tool and diemaking. This gets back to our original concept that everybody should leave school with some salable skill." (page 52)

A. D. LITTLE - A NATIONAL CONSULTING AGENCY SPEAKS OUT

Little, A. D., "Study of The California State Public School Vocational Education Program" Progress Report No. 5 (Arthur D. Little, Inc.) 1968

This study is frequently quoted by California legislators and educators. Selected excerpts and recommendations are as follows:

1. We believe there is an opportunity to greatly enhance the support for and effectiveness of vocational education in California by the generation and use of information, quantitative when appropriate, designed to tell how and to what extent the vocational education enterprise is achieving specific, pre-established objectives. Such specific information is necessary not only for evaluating operations but also for testing the validity of policy. Such management information is very different from descriptive information which broadly tells about the ongoing enterprise but not in terms related to specific policies, objectives, and priorities. For example, a report on the allocation of federal funds to various occupational categories of training would be descriptive material; to compare those allocations with the level of job opportunities in the various occupational categories would be management information addressed to a policy which called for the allocation of funds in accordance with employment opportunities.

2. We believe the Board (of Education) could usefully establish a somewhat longer, more comprehensive set of funding priorities related, for example, to:

   a. The acquisition of vocational teachers from important segments of California's minority populations.

   b. The allocation of funds among the various categories of occupations.

   c. Research and development on "organic" curricula.

   d. Allocation of resources between girls vocational education and boys vocational education at the secondary level.

   e. Rules for geographic coverage with emphasis on bringing vocational education to major centers needing it (e.g., Sacramento, San Francisco).

3. In our research, we have found that most schools have little or no follow-up of vocational students on a continuing basis. A few have some follow-up and we have found or heard of several instances in which there are truly effective programs. This condition is reflected in the State Department's Special Staff Report to the Board's Committee on Vocational Education, dated May 8, 1968, which includes policies, procedures, and progress on the allocation of P.L. 88-210 funds. The report contains no follow-up information in its presentation on the "total effect" (of VEA '63) upon vocational education in agriculture, vocational education for the business occupations, vocational trade and industrial education, vocational education for the technician occupations, or vocational education for the health occupations. In fact, only in reporting the effect of VEA '63 upon contributions of home economics to gainful employment are follow-up employment data offered. These follow-up data show that for Fiscal 1965, 19% of those enrolled obtained employment immediately after training and 24% continued education after initial training; in Fiscal 1966, the percentages were 23% and 20% respectively; and in Fiscal 1967, 14% and 9% respectively. From the follow-up data which are made available in this category, it is startling that the relative accomplishments appear to be declining although that is not necessarily the case. In any event, an analysis of the meaning of the data is needed.

4. In our view, the following are among the fundamental issues surrounding guidance and counseling.

   a. That effective guidance and counseling with a ratio of 300 to 1,000 students per guidance counselor is an impossibility. While project VIEW attacks one facet of this problem and is to be applauded, there is no program for addressing a solution to this problem.

   b. Our research discloses that screening of students is considered essential in providing good vocational education. The resulting high drop-out rates in urban ghettoes, the invisibility problem, high absenteeism, and subsequent youth unemployment are by-products of an educational system that screens people out.

   c. There are capabilities within the vocational education establishment which are not explicit requirements within the subject matter bureau framework. For example, the capability of vocational agricultural education to relate to and involve students and community is a valuable capability. The question of its transferability to other subject matters and locales has only been touched upon thus far.

A CONCEPT OF CHANGE

Smith, Arthur, "Cooperative Occupational Survey" (unpublished), Riverside Unified School District.

This study gathered information on students and employers, and related skills to specific job categories. Required skills identified by the employer were selected to student skill requirements and job opportunities identified with a specific skill were then categorized by job titles rather than by industry.

A total of 239 different job titles were identified from the business and student questionnaires as potential entry employment categories. Some of the patterns emerging from this distribution include the following:

a. The 13,807 jobs reported by 637 employers who reported one or more entry jobs were distributed among all of the major divisions of business activity. Over 80% of the entry-level jobs were reported by the following employer groups:

Manufacturing	30.4%
Government	24.9%
Retail	14.2%
Professional Services	10.7%

Over 93% of these beginning jobs were in the following employment groups:

Skilled, semiskilled, unskilled	38.3%
Clerical	31.7%
Sales	8.8%
Protective Services	7.7%
Personal Services	6.7%

b. Employers identified less than one-third of the jobs with high school non-graduation. Of the jobs identified with non-graduates, over half of them fell into the Skilled, Semi-skilled, and Unskilled category. Additional smaller quantities were identified with the Protective Service, Personal Service, and Agriculture job categories.

c. Over 69% of the jobs were identified with a high school education or more as desirable. The major groups identified with the high school level of education include jobs in:

Skilled, Semiskilled and Unskilled	Clerical
	Sales

Some specific jobs identified with a junior college educational level include those in:

Clerical	Professional and
Sales	Semiprofessional
Protective Services	Management and Official

d. Over 85% of the students who returned questionnaires reported holding one or more jobs in the two and one-half years between graduation and the time of the survey. The average number of jobs held was 2.7. Seventy-seven percent of the jobs were reported held in the greater Riverside-Corona area. Almost 84% of the student reported jobs were within the following job groups:

Clerical	31.1%
Skilled, semiskilled, unskilled	26.0%
Sales	11.9%
Personal Services	11.7%
Protective Services	3.2%

e. Further analysis of the 239 different kinds of specific jobs revealed that 126 were within the Skilled, Semiskilled, and Unskilled job group. There appears to be no dominant category of jobs with which to identify a single curriculum offering even though this group represents the largest employment quantity reported by the employers and second largest as reported by students. By dividing this category into further subdivisions, the largest job family identifiable with employers represents 23% of the total group. The largest student job group using the same category division is 18.4% of the total. Future planning will necessitate recognition of the importance of flexibility and diversification through interdepartmental coordination.

PART II

FINDINGS OF FOLLOW-UP STUDIES

FOLLOW-UP ON HIGH SCHOOL WORK EXPERIENCE GRADUATES

California Department of Education, "Work Experience - A Follow-Up", Occupational Research News, p. 4 - 5, (3:1) March, 1968.

Work Experience - A Follow-Up

Educational Research Series, Bulletin Number 39, is a publication of the College of Educational Administration, Michigan State University, East Lansing, Michigan. The bulletin reports how 8,146 Michigan high school cooperative trainees fared in the labor market ten months after graduation. The following are selected major findings:

1. The unemployment rate was low.

   A fraction more than 1% were unemployed ten months after graduation. Nearly six out of ten (55%) of those available for work had obtained their current full-time employment within one month after graduation. By ten months after graduation:

   ...58% were employed full time
   ...13% were employed part-time most were married or attending a school or college
   ...16% were attending a school or college on a full-time basis
   ...5% were in the military service.

2. A significantly large number of trainees--almost four out of ten were attending college or enrolled in a school beyond the high school on either a full - or part-time basis

   ...31% of the office trainees were attending a school or college (14% full-time)
   ...40% of the distributive trainees were attending a school or college (16% full-time)
   ...48% of the trade and industrial trainees were attending a school or college (21% full-time)

3. Of the 1965 trainees, 26% were not in the labor market.

   ...5% were housewives (and not otherwise employed)
   ...16% were attending college or a school (full-time)
   ...5% were in military service

4. The trainees were putting their training to work by being employed in the field for which trained.

   ...39% of the office trainees were working in an office occupation
   ...47% of the distributive trainees were working in a distributive occupation
   ...70% of the industrial trainees were working in an industrial occupation

5. The employers who trained the cooperative trainees were benefiting by securing full-time workers.

...25% of the cooperative education trainees remained with their cooperative firm ten months after graduation
...37% of the cooperative trainees have worked for their cooperative employers but have resigned since
...28% of the office trainees, 22% of the distributive trainees, and 21% of the industrial trainees were with their cooperative firm ten months after graduation
...An additional 32% of the distributive trainees, 41% of the distributive trainees and 45% of the industrial trainees have worked after graduation for their cooperative employers but have resigned since

6. Cooperative trainees were average or better than average students academically.

...In the upper half of their class were 75% of the office trainees, 45% of the distributive trainees, and 47% of the trade and industrial trainees
...40% of the office trainees ranked in the upper 25% of their graduating class

On the basis of these findings, one can conclude that cooperative vocational education contributes in helping young people secure employment soon after graduation and does not prevent them from furthering their education.

Employers benefit because many trainees remain with their cooperative training employer full time after graduation. Cooperative education is provided for achievers at all academic levels (but cooperative trainees as a group have an academic ranking as good or better than the average of their graduating class).

FRESNO COUNTY ASSESSES ITS NEEDS

_____, EDICT Vocational-Occupational Survey, (Fresno County Regional Planning and Evaluation Center) Fresno, California, 1968.

Fresno County, while not part of the North Bay Region; has a similar agriculture-industry based economy. Their high school graduates must face the same vocational problems as ours. Some interesting findings of the study are included in the attachment.

SURVEY OF EDUCATIONAL NEEDS

SUMMARY

Findings and Conclusions

Findings Related to Secondary Schools

On the basis of data gathered and reported in the overall study report, the following findings were determined and considered to be valid.

1. Other than on individual and incidental basis, there are no organized or systematic programs for helping learners explore occupational options or the world of work.

2. Vocational libraries are not generally reported to be used as an effective means of helping learners explore occupational options and requirements.

3. The role of non-teaching counselors in assisting learners to explore vocational options and the world of work is not considered to be highly effective. The reasons are not certain but it appears that lack of time and lack of specialized skill in the field of vocational counseling are among the contributing factors.

4. The role of classroom teachers in helping learners explore the world of work and occupational options is not considered to be very effective either. Their approaches to the problem are related most frequently to traditional teaching units on careers, the use of occasional resource persons and study trips and the occasional use of films.

5. Work experience programs of a realistic nature, with few exceptions, are very weak, and for the most part, nonexistent. There are few opportunities for young people to actually work and explore the world of work in realistic settings and circumstances which involve cooperative arrangements between the community and the school. Most frequently cited as work experience programs are those recently funded federal assistance programs which allow needy students to work part time, but these usually involve only tasks which are performed within the school setting and are not really in any real sense work experience programs.

6. The research team did not sense any real urgency among school personnel concerning the importance of implementing realistic work experience programs.

7. The schools are reported to be doing an average job in achieving a realistic balance between training young people for specific job skills and educating them for broad "families" of skills. Many respondents indicated that they do not really feel that they are engaged in vocational training at all on secondary levels but are engaged, actually, in providing exploratory or general education only.

8. The vocational field which was most frequently cited as offering young people opportunities to learn broad "families" of skills is agriculture. It is noted, however, that agriculture is a field which is almost daily diminishing in opportunities for employment.

9. The emergence of some new courses, particularly ornamental horticulture, was noted in various schools. It is not too clear why this course has suddenly assumed as much importance as it appears to have. Several cited its importance as a field where many job opportunities exist, but none really knew the extent of such job opportunities. Others mentioned that it was being emphasized in an attempt to compensate for falling enrollments in more traditional agriculture classes. Others considered it to be a useful general education offering.

10. Most respondents recognized the importance of educating young people for broad occupational competence as contrasted to teaching them only very narrow, single skills, but existing practices show much less effective programs than school personnel indicate they would like to have and which appear desirable.

11. There were virtually no reported requests from local businesses, industries or agriculture for special training by the high schools. In one or two districts where it was reported that such requests had been made, there was some indication that such requests had been made more as a courtesy gesture by community agencies and businesses to assist the schools in securing federal funding for new and existing programs. The research team is not certain how many were actually bona fide requests, and in some instances, it is not certain how appropriate such requests really are to the mission of the high school.

12. Only limited and incidental use is made of existing human and material resources in the community. Vocational classes were not reported to be using to a great extent the expertise and considerable material resources which are known to exist within the county. It is up to individual teachers to search out and use such resources and this is reported to not be done very systematically or effectively.

13. Virtually no local, regional or national manpower studies or occupational projections are being used in vocational education planning.

14. Basic changes in vocational education curricula have not been very many or extensive in recent years. Few courses have been eliminated and sometimes those which have been eliminated have been removed for what would appear to be the wrong reasons. (e.g., lack of space).

15. Some reported revisions appear to be more apparent than real (e.g., changes in titles only).

16. Most new courses are those which have recently been either totally or partially funded federally.

17. While many new courses appear to be well-supported and are considered to be quite effective, it is not always apparent that the needs for them have been carefully researched as regards employment potentialities or

indeed their appropriateness as terminal training at secondary levels.

18. Although school personnel rated the equipment and facilities overall in their schools only as average, it is noted that some programs appear to be well equipped. Such programs almost always appear to be federally funded, either totally or in part.

19. Follow-up studies of vocational graduates are almost nonexistent and therefore not used in curriculum revision and planning.

20. Due to a lack of effective follow-up studies, it is not known how many graduates of so-called "terminal" vocational education curricula continue their post-secondary education. It appears that anywhere from 10% to 50% do so.

21. Most vocational teachers have not had much recent personal work experience related to their teaching. In cases where they have worked or are working in jobs in agriculture, business or industry, such jobs usually exploit existing personal skills to earn additional money and are not, for the most part, of a nature which enables them to develop new skills or insights which are particularly useful in their teaching.

22. Citizens Advisory Committees are reported to be used with varying degrees of effectiveness, but generally they are not used very extensively or well. On operational levels, many teachers appear to be scarcely or not at all aware of the existence or functioning of such committees. Some, particularly in fields such as business and industrial technology, are reported to function better in a few communities, but too often such committees exist more to assist with such projects as passing bond issues or in response to federal funding regulations than they do to serve as useful and important adjuncts of the instructional program.

23. In districts where such advisory committees exist, members appear to be well selected and broadly representative of the vocational area represented.

24. In the secondary schools, there are few programs or classes for training or retraining of adults. Such programs are catered for by other agencies such as adult education divisions and junior colleges in varing degrees. In some communities there is little or nothing available.

25. There is not much effective articulation of vocational education programs as it involves the high schools, the junior high schools and the two and four-year colleges. "Articulation" with the junior high school consists primarily of informing the junior high school teachers, students and parents of the high school's programs. This is done through traditional devices as visitations, "Parent Nights" and the use of films and brochures.

Articulation between the high schools and the colleges is reported not to be very good or extensive. Articulation between the high schools and the four-year colleges, primarily Fresno State College, is reported to be even less effective.

27. Students in vocational education courses are reported to be receiving about as much help in learning how to use their leisure time effectively and

richly as are the more academically-oriented students. Some respondents felt that neither group is really being served very well in this regard.

28. Procedures for evaluating student growth and progress in vocational education are reported to be quite similar to those used in the more academic subjects. There appears to be considerable emphasis on standards and rigor in the vocational subjects.

29. There appears to be neither special encouragements or discouragement of academically able students to enroll in vocational courses. For the most part, it is reported that the issue becomes largely academic, due to lack of time.

30. Little is being done to train young people for jobs related to newly emerging programs involving the use of sub-professional or para-professional personnel (in fields such as teaching and health, for example).

31. Virtually no para-professional personnel are being used to assist teachers in vocational classes.

32. Virtually no non-certified personnel with special skills and expertise are being used to assist teachers in the vocational classes and to enrich vocational offerings.

33. The use of instructional innovations such as team teaching and programmed instruction are almost non-existent in vocational classes.

34. There is virtually no identification of specific jobs or careers for which vocational home economics classes on secondary levels prepare young women.

35. There are very few jobs involving self employment in agriculture for which vocational agriculture classes prepare young men. Indeed there are not many existing job opportunities of any kind in agriculture for which vocational agriculture courses specifically prepare young men.

36. There do not appear to be many systematic or carefully planned counseling programs related to the needs of young people who are considering careers related to vocational education. The major emphasis appears to be upon testing. Lack of time, specialized expertise, and personnel limit the help which is available.

Findings Relating to the Junior Colleges:

1. Most respondents recognized the importance of helping learners to explore the world of work, but felt that not too much was being done at the junior college level.

2. There are few existing programs of work experiences at the junior college level although in one situation an outstanding variety of apprenticeship programs was reported.

3. There is little evidence that vocational-occupational courses are being related to social sciences and humanities at this level.

4. Though respondents recognized the need for vocational education of the "broad family-of-skills" nature, little evidence was found that training of this nature is being realized at the present time.

5. There are some courses such as carpentry, electronics, auto mechanics, building technology, para-medical areas and business education which stress a multi-skills approach.

6. Significant manpower studies are little known and less used in the planning of programs of vocational education at the junior college level.

7. Not too many significant changes have been made in vocational education programs at the junior college level during the past three years. Computer programming, landscape architecture, and some courses referred to as "agribusiness" were mentioned as having been added during the past three years. A few new programs such as inhalation therapy were mentioned as were police science and reprographics, commercial pilot ground training, building inspection and various courses for technicians.

8. Not too many specific requests have come from business and industry to train potential employees, though a few were reported in all schools and a considerable number in one school which is in a large urban setting.

9. The use of community resources in instruction has been limited at the junior college level.

10. Little follow-up information of graduates who terminate their formal education is gathered by the junior college.

11. It is not generally known what percent of students in vocational education programs continue their education or find work in the area of their preparation.

12. There is both wide and effective use of community advisory committees for vocational education at the junior college level.

13. No particular pattern was found concerning the method of choosing advisory committee members.

14. There seems to be broad representation of business, agriculture and industry on advisory committees for vocational education at the junior college level.

15. Advisory committees are used some in designing curricula, but are not used much in setting standards (except in apprenticeship programs) or securing equipment and facilities.

16. Considerable emphasis is given at the junior college level to the training and retraining of adults.

17. Except in one particular situation, articulation between junior colleges and secondary schools and four-year colleges is weak.

18. Education for leisure time is not a major concern in vocational education programs of junior colleges in this county.

19. With one or two exceptions, the philosphy of evaluating student progress in vocational education differs very little from that used in academic courses at the junior college level.

20. In general, equipment and facilities being used in vocational education programs at the junior college level compare favorably with those used in local business and industry.

21. Follow-up studies of a formal nature generally are not being made at the junior college level.

22. Programs of training for dental and nurses aides and nursing and para-medical personnel comprise the programs for the training of para-professionals found in the junior colleges studied.

23. There is little evidence of any bona fide team teaching in the junior colleges of this county.

24. Teacher aides are not being used in the junior colleges under study. Some clerical aides are being used.

25. Non-certificated persons are not being used for teaching in the junior colleges in this county. Certification requirements of regular or special nature are met.

26. Academically able students are not particularly encouraged to enroll in vocational courses to any appreciable extent in these schools. In one college a minimum participation by all is required, however.

27. Very little programmed instruction is used in the junior colleges in this county.

28. Relationships with other junior colleges and four-year colleges as these relate to vocational education are weak. Some efforts to effect closer relationships among the junior colleges are currently being explored on a valley wide basis.

29. Home economics programs in the junior colleges do not generally stress careers outside the home as a terminal function.

30. There seems to be some confusion concerning the objectives of agricultural programs at the junior college level. There was some indication that a few respondents felt obligated to offer agriculture to help provide students for the four-year college in the vicinity. In general, limited opportunities to be self-employed in agriculture were recognized.

31. Agricultural programs in the junior colleges which have such programs are generally oriented to employment in related areas.

32. There is some encouragement for students to elect vocation courses to round out their programs, but the general education value of such courses is not stressed.

MARIN COUNTY - WHO GOES WHERE?

Walker, Arthur F., "A Study of the 1962 through 1966 Graduates of Tomales Joint Union High School" (Marin County, Dr. Virgil Hollis, Superintendent, 1967.

This study involved 136 graduates of the Tomales Joint Union High School District. The graduates were queried by questionnaires to obtain data on educational objectives. The findings and the summary data are included as Attachment I.

TOMALES SCHOOL DISTRICT EVALUATION

This study was made by the Marin County Superintendent of Schools Office in 1967. The objectives of the study are:

1. To attain data that would assist in the development of curriculum and instructional materials for Vocational Education in the Tomales Joint Union High School District.

2. To investigate the type and length of employment of the graduates from the Tomales Joint Union High School District.

3. To determine the actual employment rate for the 1962-66 graduates of the Tomales Joint Union High School District.

4. To determine the unemployment rate for the 1962-66 graduates of the Tomales Joint Union High School District.

5. To determine the mobility of the students graduating from the Tomales Joint Union High School District.

6. To evaluate the effect of additional education in the employment status of the graduates from the Tomales Joint Union High School District.

7. To better relate the environmental factors, namely, the Tomales area to the employment, education and mobility results of the survey.

8. To compare the educational status of females and males who have graduated from the Tomales Joint Union High School District.

Summary:

Perhaps a recapitulation of the results of the survey would be helpful:

1. There were 41.9% of the graduates employed full-time.
2. An actual unemployment rate of 7.4% remained after deleting those graduates that were housewives or students.
3. There were 41.9% of the graduates enrolled in some type of advanced educational institution.
4. A total of 14% of the graduates were in the Armed Forces.
5. There were 53% of the graduates that remained for one year or more in their most recent job.
6. There were 50.7% of the graduates that continued residence in the Tomales Joint Union High School District.
7. The male graduates were employed mainly in the Armed Forces, followed by the farm manager and farm labor fields.
8. The female graduates were employed mainly in the clerical fields, followed by the service area.

Research into the data collected proves that more students are attending college today than did five or six years ago. For evidence the following data was obtained:

Marin County
Attachment I

GRADUATES HAVING NO ADDITIONAL EDUCATIONAL EXPERIENCE

1962 - 14 out of 26 graduates or 53.3%
1963 - 12 out of 26 graduates or 41.9%
1964 - 8 out of 21 graduates or 33.3%
1965 - 10 out of 30 graduates or 33.3%
1966 - 9 out of 30 graduates or 27.3%

Recommendation:

The obvious difficulties for young people to attain their occupational goals, because of the void of career training in high schools, is continuously pointed out in this and in other local and national studies. Subsequent follow-up studies of graduates are needed. An extensive, in-depth, plan of organization, outlining specific objectives should be delineated before the study is conducted. A continuous contact should be maintained with the graduates and current graduating classes should be oriented in the fact that they will be part of subsequent follow-up studies.

NAPA COUNTY SURVEY

Taylor, Arlin G., "Education and Career Study," (Office of the Napa County Schools), Piercy C. Holliday, September 1966.

This study solicited student opinions regarding their future careers and the preparation for them. Three high schools were surveyed. Selected findings were as follows:

1. Absolute certainty of career among senior students varied from 5% to 23%.

2. When students were asked to rank the factors having the greatest anticipated affect on their career, they ranked hard work, intelligence and personality as most important.

3. Career choices of the students are noted on Attachment I.

4. Anticipated source of occupational training is noted on Attachment II.

Napa County
Attachment I

Field chosen by 12th grade female students as a career choice

Schools	Napa			St. Helena			Calistoga		
Career Fields	No.	Weighted No.	Rank	No.	Weighted No.	Rank	No.	Weighted No.	Rank
Teaching	164	391	1	16	36	2	4	10	3.5
Business	146	329	2	8	20	6	4	10	3.5
Clerical	120	266	3	20	45	1	5	10	3.5
Social Service	123	236	4	12	21	5	7	11	1
The Arts	80	176	5	6	32	4	4	10	3.5
Medicine	77	173	6	13	33	3	3	4	8
Public Relations	73	109	7	10	17	7	2	2	12
Sales	58	104	8	8	12	8	1	1	13
Civil Service	32	80	9	2	3	14.5	0	0	14
Entertainment	37	76	10	1	2	16.5	0	0	14
Law	28	60	11	1	2	16.5	1	3	10
Journalism	34	57	12	3	6	11	3	5	6.5
Advertising	30	43	13	4	5	12	2	5	6.5
Science	23	42	14	6	11	9.5	1	3	10
Armed Forces	21	34	15	3	3	14.5	0	0	0
Engineering	11	29	16	0	0	19	1	3	10
Skilled Trade	12	28	17	6	11	9.5	0	0	14
Church	17	27	18	0	0	19	0	0	14
Financial	15	18	19	2	4	13	0	0	14
Farming	7	14	20	0	0	19	0	0	14
No response				5			2		

Field chosen by 12th grade male students as a career choice.

Schools	Napa			St. Helena			Calistoga		
Career Fields	No.	Weighted No.	Rank	No.	Weighted No.	Rank	No.	Weighted No.	Rank
Skilled Trade	187	424	1	34	72	1	10	25	1
Engineering	150	346	2	19	50	2	5	7	5.5
Business	131	284	3	13	31	4	6	14	2
Armed Forces	114	201	4	19	39	3	5	8	4
Teaching	91	197	5	8	16	7.5	1	3	10.5
Science	174	156	6	6	16	7.5	3	9	3
Law	68	143	7	5	7	12	1	2	13.5
The Arts	47	111	8	5	12	9	0	0	16
Civil Service	54	95	9	6	6	14	2	3	10.5
Sales	53	94	10	4	8	10	4	7	5.5
Medicine	34	78	11	8	21	6	2	6	7.5
Entertainment	36	72	12	5	7	12	2	2	13.5
Social Service	30	57	13	1	1	18.5	3	5	9
Farming	27	45	14	13	24	5	2	0	16
Church	19	43	15	1	1	18.5	1	2	13.5
Advertising	22	42	16	2	4	15.5	2	2	13.5
Journalism	21	40	17	5	7	12	0	0	16
Clerical	17	35	18	2	2	17	0	0	16
Public Relations	22	33	19	2	4	15.5	3	6	7.5
Financial	21	31	20	0	0	20	0	0	16

Anticipated source of occupational training in the opinion of 12th grade female students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	36	9	0	0	1	8
Junior College	119	28	15	33	3	23
Four Year College	163	39	20	45	8	62
On the Job	104	24	14	22	1	7
Total	422	100	45	100	13	100

Anticipated source of occupational training in the opinion of 12th grade male students.

School	Napa		St. Helena		Calistoga	
Source	No.	%	No.	%	No.	%
High School	25	5	3	5	1	6
Junior College	137	29	15	27	6	33
Four Year College	133	28	19	34	6	33
On the Job	179	38	18	34	5	28
Total	474	100	55	100	18	100

NORTHERN CALIFORNIA - STUDENT RESPONSE

Rapose, Joseph C., "The Northern Califonia Small High Schools Project" (Tehama County Superintendent of Schools), August 1968.

This survey included 4168 high school students in Northern California. The responses were summarized as follows:

1. A substantial portion of the students would prefer a more vocational program in high school.

2. 52% of the students plan no education beyond high school.

3. 31% of the students plan on a career in the professional - technical occupations. (Other national studies and reports indicate that only 10% of current high school students will graduate from college with an A.B. degree or its equivalent.)

4. Only 4.89% of the students say they've talked over their career choices with a teacher or counselor. An addittional 33% say they've made a choice following a combination of talking with friends, parents, counselors or teachers. 43% claim to have decided all by themselves.

5. 84% of the students have made at least a tentative career choice in grades 7-11. Over half of the students make this tentative choice during grades 7-9.

6. 15% of the students didn't know that occupational information even exists.

7. 59% of the students have never used occupational information.

8. Only 2% - 3% of the students made a point of dwelling on occupational information with the assistance of a counselor or teacher.

9. 50% of the students have never seen or used a college catalog.

10. 57% of the students have never had an Interest Inventory or an Aptitude Test, or do not know what such tests indicate concerning their future.

11. 31% of these students (grades 9-10-11) are already working part-time while attending school.

MARIN COUNTY
"THE CONCLUSIONS OF A PRIVATE EDUCATIONAL CONSULTANT"

Odell MacConnell Associates, "Occupational Education." (Odell MacConnell Associates), 1965.

This report was prepared by a private consulting firm and identifies occupational needs and trends in Marin County. It was designed to serve as a reference for direction of future occupational education programs.

SUMMARY AND RECOMMENDATIONS

America is in the midst of one of the most perplexing times in its history with respect to present occupational needs and future trends. In some respects the Industrial Revolution has only recently shifted into high gear, and even the experts are unwilling to venture very definite prognostications as to what will be the end, or even to the situation in the not-too-distant future. Among those who do venture predictions there is not good agreement.

The change from a predominately agricultural-rural economy to an industrial-urban one has been substantially accomplished. Improved mechanization of farming processes, better farming practices, and improved plant and animal varieties have accounted for a much smaller proportion of total workers being required in agriculture for ever greater production. Population shifts accordingly have taken place from the farm areas to metropolitan centers all over the country.

In the cities much the same story has been repeated with respect to the way in which work is done. Mechanization of many processes, improvement in products and processes, automation of the mechanical work, etc., has occurred and continues at a rapid pace. The former need for unskilled workers has been greatly reduced. Work for young people of less than 18 years of age in cities has become almost non-existent. Initial jobs for those of that age bracket require either little or no specific job-skills, or else a considerable amount that makes training beyond high school necessary.

Thus our schools and young people and their parents face difficult problems today in deciding about occupational preparation or vocational education in the high school and junior college.

If we were to select only three facts which are of greatest consequence from a vast array that profoundly affect our educational program today, they might well be the following:

1. There is little or no (or at least a steadily decreasing amount of) need now to employ, for paid work, our youth under 18 years of age in most urban centers.

2. When pupils graduate at age 18 from high school to commence work, or get jobs without graduation at that age or earlier, there is ordinarily very little job skill or specific vocational knowledge required to get and hold initial jobs.

3. Not all children like intellectual approaches to learning equally well; some do not like intellectual approaches at all. Each child (or learner) needs to be challenged in a way which appeals to him if effective learning is to occur, and some children may not choose to learn much of what the schools traditionally wish to teach. In short, there are many different ways to achieve learning which derive from differences in individual learners' abilities and interests. These are greater in number and complexity than we ordinarily acknowledge in schools as now constituted.

The foregoing first two generalizations about jobs may differ markedly from one community to another, or from one time to another in a given community, or from one job category to another. But they are becoming more true in more work centers as time goes on. There applicability, of course, must be verified in each community continusouly as school programs are developed and operated to be sure that current local needs are being met.

An overview of the total occupational education program of all secondary schools of Marin County would indicate that much is presently being done. However, that which is being done seems to lack continuity, points of reference, and application to current employment opportunities. Presently outstanding programs are largely the result of the individual initiative and enthusiasm of persons who have multi-responsibilities. There should be more agreement as to objectives, values, programs, techniques, sequence of courses, etc. There are some gaps and some duplication. Most of all, there is no real way to place responsibility for continuing quality, effectiveness, and applicability of occupational education programs. If one views the total program collectively, it has yet a way to go to meet the real needs of the county, both presently, and more importantly, in the future.

Recommendations

To provide for a sound public high school and junior college occupational education program for Marin County, the following recommendations are made:

1. That occupational education coordination and advisory services be provided to all county secondary schools by the Office of the County Superintendent of Schools. To provide the recommended comprehensive services, a full-time Coordinator of Occupational Education should be employed.

   The County Coordinator of Occupational Education must be an individual with multiple competencies, including the basic requirement of knowing how to work with people, plus an understanding of the student counseling process, and a thorough knowledge of the world of work (labor force and market).

   The primary responsibilities of the County Coordinator should be to: (a) function as an informed member of the County Occupational Education Coordinating Committee in the determination of need for new or revised occupational education programs; (b) confer with the representatives of individual districts to develop or refine occupational offerings; and (c) work with counselors to integrate an understanding of the occupational training needs of in-school youth with methods of imparting accurate and relevant information to these students and their parents.

2. That each school district within Marin County make some one person responsible for the coordination of all aspects of vocational education within the district, and as district representative, to help coordinate county-wide programs of occupational education.

3. That there be created a County Occupational Education Coordinating Committee, consisting of the coordinators assigned by the several school districts, the College of Marin, and the County Office. This committee should continuously review the programs offered and the occupational needs defined to determine the initiation and location of new occupational programs within the county. This committee should also form the nucleus of a broader committee involving all angencies conducting or planning to begin vocational programs (Department of Employment, Welfare Department, Economic Opportunities Commission, etc.)

4. Every pupil irrespective of his term of schooling needs continuous contact with reliable and appropriate (for him) occupational information. Studies have shown that this need begins earlier than is commonly supposed -- in the early elementary grades. Thus, in any school system there must be developed a plan for gathering, interpreting, and disseminating occupational information that is relevant to the local situation and to the age and level of the pupil concerned. Such a program must be continuous and perpetual.

   The task of accomplishing the objective stated above is a huge one and will require the cooperation and assistance of many within a planned program. At least one specially qualified person should be available in each district to assist and coordinate the activities of the counseling and teaching staff in matters concerning occupational information and counseling.

5. A county-wide center for occupational information materials collection, preparation, and dissemination should be established in the Office of the County Superintendent. A staff member at the County Office should be assigned the responsibility of coordinating these activities with the identification and development of new programs designed to fulfill local and/or county-wide needs.

6. To provide for a continuous, consistent flow of information about career plans of in-school students, about students who leave school prior to graduation , and about the actual experiences of graduates, a county-wide data gathering program is urged. Such a program would be established and supervised by the County Occupational Education Coordinating Committee and should be programmed for data processing equipment. It is anticipated that the initial stages of such a program for the follow-up of all students in the county will yield data which will serve every aspect of school district programming and would qualify for funding under the various vocational acts, and under Title III of Public Law 39-10.

7. Examination of the types of occupational education programs presently offered in Marin County high schools indicates that these are relatively simple and are designed for entry into certain beginning jobs available in the area, as is appropriate. This program needs expansion based upon further study by the County Occupational Education Coordinating Committee.

In particular, short-term training, at least, could be provided at twelfth grade level for some students in distributive education, in motel and restaurant occupations, in child and elder citizen care, for recreation aides, etc. Where these programs are offered in only one area of the county, interdistrict attendance agreements should be arranged to facilitate limited attendance of pupils from other school districts of the county.

8. The College of Marin is regularly adding new semiprofessional offerings to its program. This practice should be continued, with full acceptance by the junior college of a responsibility to plan jointly with the County Office and the high school districts (County Occupational Education Coordinating Committee) to make certain that any identified vocational needs of citizens within the county are somehow provided for.

9. The County Occupational Education Coordinating Committee should undertake as one of its early tasks the better structuring of a total plan of occupational education for all aspects beyond those carried on in the high schools and junior college for regular day pupils. This would include all adult and evening programs, MDTA, programs by agencies other than the schools, etc.

10. It is believed that no separate County Vocational High School is desirable or needed in Marin County in the foreseeable future if other existing schools meet their proper functions as outlined above. Such specialized schools are decreasing in frequence and popularity in the nation today at the high school level.

ARE CAREER SELECTION METHODS VALID?

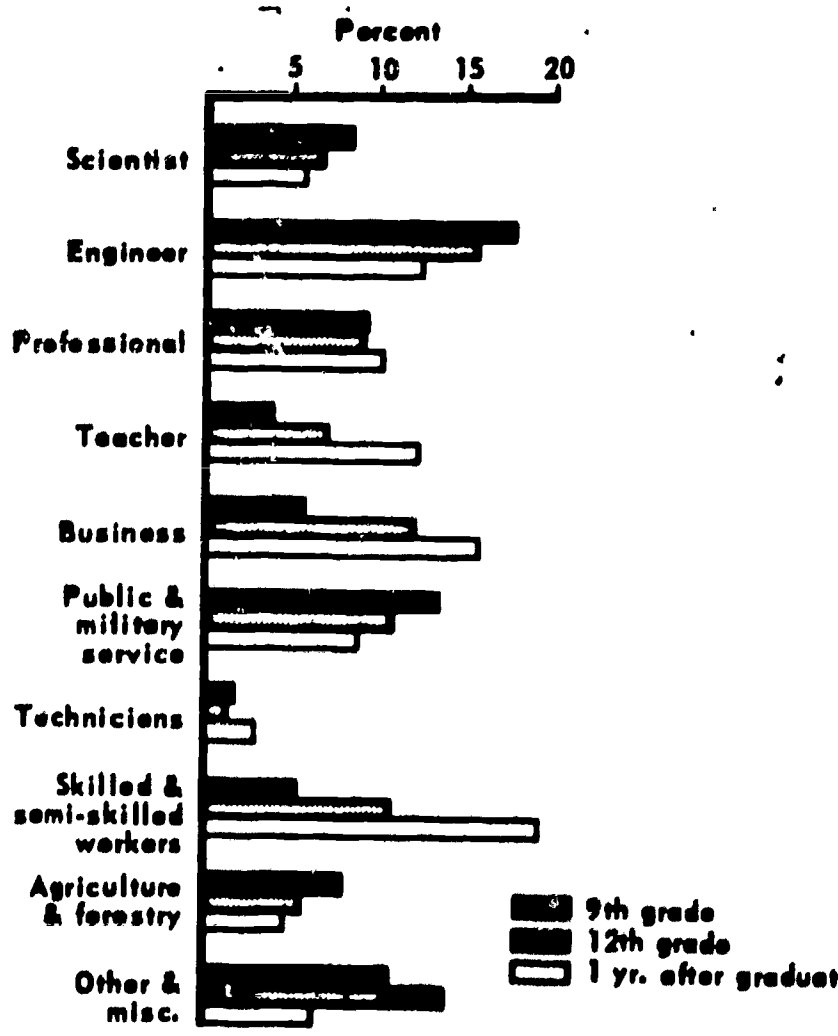
California Department of Education, "Career Choices" Occupational Research News, p. 2, (3:1), March 1968.

Career Choices

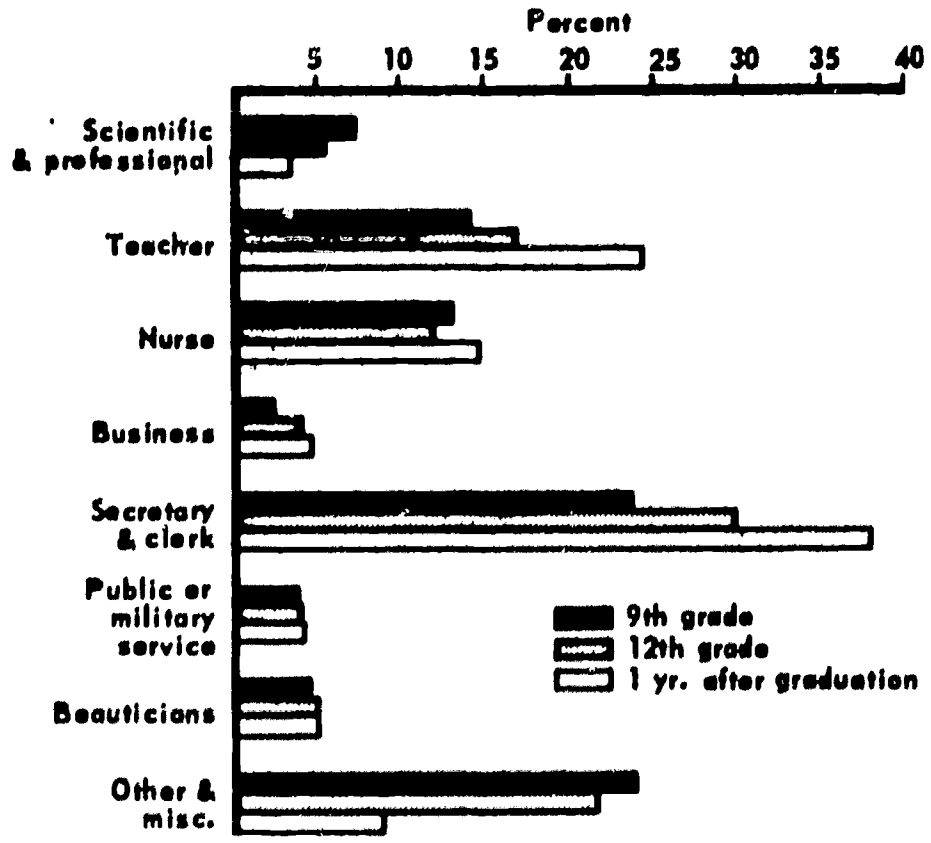
Some selected results of the National Project TALENT indicate that the majority of students do not make appropriate career choices while in high school.

The findings of Project TALENT as published in their Bulletin No. 4,* February 1965, show that high school students have unrealistic educational and career plans. Goals are least accurate at the ninth grade level and improve somewhat throughout the high school years. About one half of the young people made relatively radical changes in their plans during the final year after graduation from high school.

The charts on this page show that ninth and twelfth grade choices were out of line with available jobs, student ability, and/or interest.



Percent of Males Planning Various Careers at 9th Grade, 12th Grade and 1 Year After High School Graduation



Percent of Females Planning Various Careers at 9th Grade, 12th Grade and 1 Year After High School Graduation

*This bulletin may be obtained by writing to: University of Pittsburgh, Project TALENT Office, 200 South Craig Street, Pittsburgh, Pennsylvania 15213.

MARIN COUNTY - IS STUDENT INTEREST A VALID CRITERIA FOR DETERMINING THE VOCATIONAL CURRICULUM?

George Ebey Associates, "Occupational Curriculum Study - College of Marin", 1962.

The objective of this study was to determine the occupational programs of greatest interest in graduating high school seniors and to evaluate the employment opportunities for the graduates of these programs. Data for this survey was derived from student questionnaires and interviews with selected Federal and State agencies.

This study was oriented towards determining what specific career development courses should be offered at the College of Marin since an average of 45.5 percent of the high school seniors stated that they might attend that specific college.

Students were provided an opportunity to identify their interests among thirty occupational programs. The programs of highest interest are noted on Attachment I.

This study does <u>not</u> relate interest and training with job opportunities in the geographic area, except for a few selected occupations that the authors proposed for a new curriculum at College of Marin.

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TEN OCCUPATIONAL PROGRAMS OF STRONGEST INTEREST
HIGH SCHOOL SENIOR BOYS
ALL SEVEN HIGH SCHOOLS

Occupational Program	Very Strong Interest	Strong Interest	Total
Mechanical Engineering Technology	11.0%	14.7%	25.7%
*Law Enforcement	10.3	13.2	23.5
Automotive Mechanic	11.5	10.6	22.1
Electronic Engineering Technology	9.2	11.7	20.9
*Building Technology	6.5	13.9	20.4
Civil Engineering Technology	8.5	11.3	19.8
General Business	5.9	12.5	18.4
Architectural Drafting	9.2	9.2	18.4
Merchandising	6.2	11.1	17.3
*Business Data Processing	4.6	9.9	14.5

*Programs not now offered by College of Marin. A start was made on business data processing by offering an evening course in the spring semester, 1962.

TEN OCCUPATIONAL PROGRAMS OF HIGHEST CHOICE
HIGH SCHOOL SENIOR BOYS
ALL SEVEN HIGH SCHOOLS

Occupational Program	First Choice	Second Choice	Third Choice	Total
*Law Enforcement	15.6%	10.8%	8.6%	35.0%
Automotive Mechanic	10.4	8.8	7.6	26.8
Electronic Engineering Technology	9.4	6.5	4.6	20.5
Architectural Drafting	8.8	4.6	4.0	17.4
Mechanical Engineering Technology	6.5	7.2	8.6	22.3
Civil Engineering Technology	5.5	7.5	5.0	18.0
Commercial Art	5.5	4.2	2.0	11.7
General Business	5.2	6.2	9.6	21.0
Accounting	5.2	3.3	2.6	11.1
*Radio Announcing, Journalism	4.2	3.3	5.3	12.8

*Programs not now offered by College of Marin.

SONOMA COUNTY - "Where Did Our Graduates Go??"

Walker, Arthur F., "A Study of the 1961, 1962, 1963 Graduates of Sonoma County" Sonoma County Superintendent of Schools, 1965.

This study involved 706 high school graduates from the Sonoma County High Schools. Their geographic domicile at the time of interview and their actual occupations are shown on Attachment I and II. The conclusions derived from this study are noted below.

CONCLUSIONS

1. Forty-two percent of the graduates were employed full-time.

2. An actual unemployment rate of fourteen percent remained after deleting those graduates that were housewives or students.

3. Nineteen percent of the students were enrolled in some type of advanced educational institution.

4. A total of eight percent of the graduates were in the Armed Forces.

5. The graduates attained entry employment in the same areas shown as trends in a previous study.

6. The male graduates were employed predominatly in the operators' occupations followed by sales, service, and clerical fields.

7. The female graduates were employed predominatly in the clerical fields, followed by the service area.

8. Parallel percentages occur in the data when it is analyzed either by separate districts or by a composite of districts.

9. Thirty-nine percent of the graduates live outside of Sonoma County, and it may be possible to assume that most of the twenty-seven percent that could not be contacted have left Sonoma County.

Attachment I

MOST RECENT TYPE OF EMPLOYMENT

4%

PROFESSIONAL

Male	9
Female	19
TOTAL	28
	155 § *Inference*

1%

FARM MANAGER

Male	7
Female	0
TOTAL	7
	38 § *Inference*

2%

MANAGER

Male	13
Female	4
TOTAL	17
	77 § *Inference*

26%

CLERICAL

Male	25
Female	153
TOTAL	178
	1,008 § *Inference*

7%

SALES

Male	24
Female	29
TOTAL	53
	271 § *Inference*

2%

CRAFTS

Male	11
Female	0
TOTAL	11
	77 § *Inference*

15%

OPERATORS

Male	101
Female	5
TOTAL	106
	582 § *Inference*

1%

HOUSEHOLD

Male	0
Female	5
TOTAL	5
	38 § *Inference*

12%

SERVICE

Male	29
Female	56
TOTAL	85
	465 § *Inference*

2%

FARM LABOR

Male	16
Female	0
TOTAL	16
	77 § *Inference*

5%

LABORERS

Male	30
Female	6
TOTAL	36
	194 § *Inference*

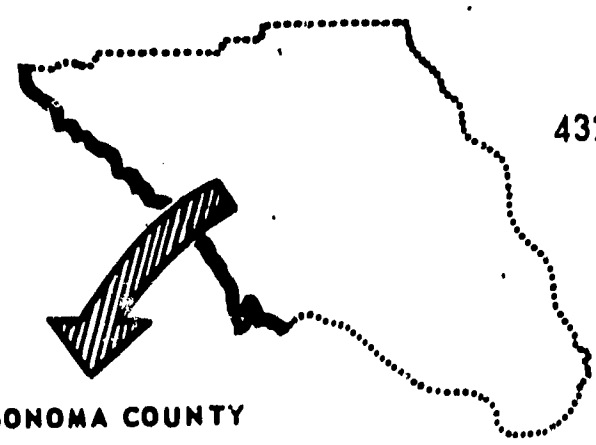
? 23%

NOT MARKED

Male	89
Female	75
TOTAL	164
	892 § *Inference*

Attachment II

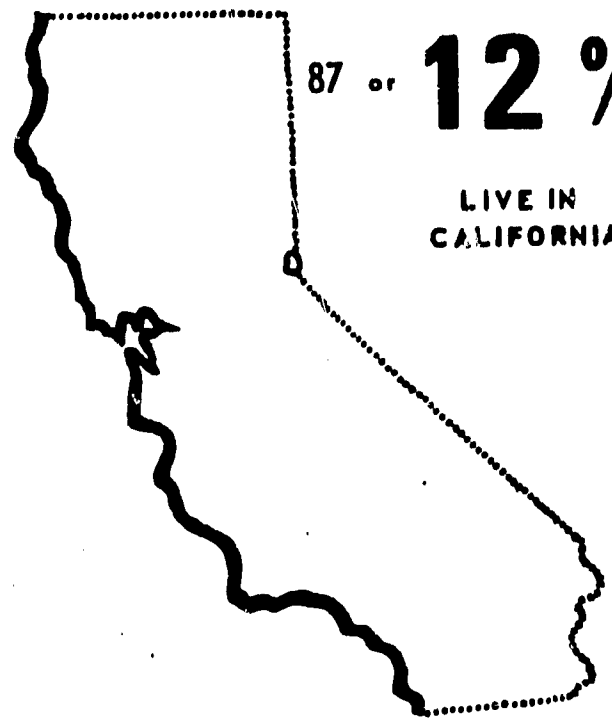
GEOGRAPHICAL LOCATIONS OF GRADUATES



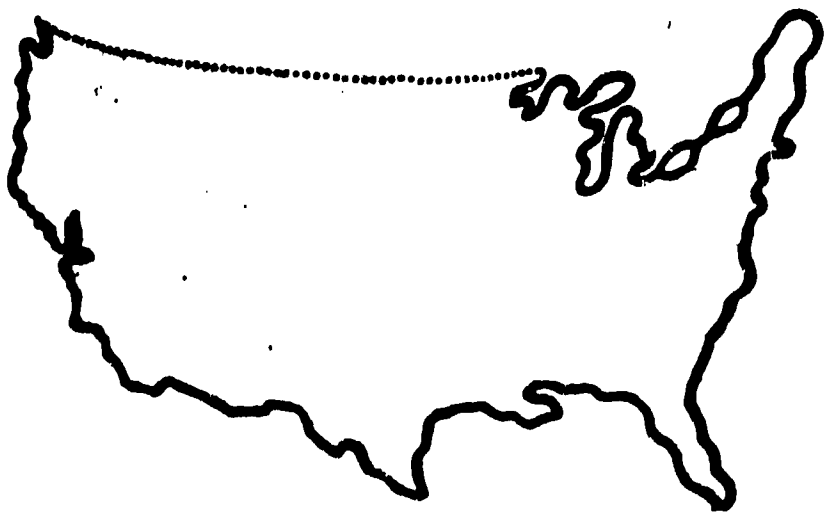
274 or **39%** 1513§
LEFT SONOMA COUNTY

432 or **61%** 2367§
LIVE IN
SONOMA COUNTY

89 or **13%** 504§
LIVE IN
THE BAY AREA



87 or **12%** 46
LIVE IN
CALIFORNIA



87 or **12%** 466§
LIVE IN
THE UNITED STATES

28 or **4%** 15
LIVE THROUGHOUT
THE WORLD

2 PERSONS UNKNOWN

PART III

VOCATIONAL EDUCATION LITERATURE

BIBLIOGRAPHY AND SOURCE MATERIAL

Selected Bibliography and source materials for Career Development are frequently difficult to locate. Various periodicals include selected book reviews or summarize recent studies but few encompass the entire field of Career Development. The ERIC clearinghouse on Vocational and Technical Education is attempting to fill this gap with their periodic AIM and ARM Indexes.* These documents incorporate a wide range of abstracts of interest to researchers and educators. AIM includes abstracts of materials typically designed for teachers and students. Both publications have a time delay from the time of publication of the source document until it is abstracted.

The American Vocational Association is also active in the synthesis, application, and dissemination of various studies and includes the "Research Visibility" section in each edition of the "American Vocational Journal."

Some of the abstracts of studies included in this report were originally published with comprehensive bibliographies which have been included in this section for the convenience of the reader.

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* AIM: Abstracts of Instructional Materials in Vocational and Technical Education, Published Quarterly, ($9.00/year).

ARM: Abstracts of Research and Related Materials in Vocational and Technical Education, Published Quarterly ($9.00/year).

Both publications are available from Publications Clerk, The Center for Vocational and Technical Education, The Ohio State University, 1900 Kenny Road, Columbus, Ohio 43212

BEST BOOKS OF 1967
ON VOCATIONAL GUIDANCE*

Robert Hoppock

Each year the author of this article undertakes to review all new books on vocational guidance, except those devoted primarily to occupational information. The best of the books dealing with the theory and practice of vocational guidance are annotated in an annual list; this is it.

Inclusion of a book in this list does not mean that the book is infallible. It does mean that the book has been compared with other publications and considered to contain useful information that would be of interest to readers who try to keep up to date on the better literature in this field. Apologies are made in advance to authors and publishers whose books have not been included and to those who find the annotations inadequate.

This review covers books published in 1967 and received before December 1. Also included are some earlier books not received in time for the last previous review.

The annual production of new works on guidance and counseling in general is now so large that it seems no longer feasible to include in this selection all of the good books which contain only one or two chapters on vocational guidance. Several such books, which would have appeared in this list in previous years, have been omitted this year.

Accredited Institutions of Higher Education. Feb. 1967, 183 pp.; Sept. 1967, 118 pages. American Council on Education, Washington, D. C. $2.00 each or $2.50 for two issues a year. More than 1600 colleges and junior colleges accredited by regional associations. Name, address, control, type, branches, chief officer, enrollment, accredited professional programs. More data on newly accredited institutions in the February issue.

Arthur, Julietta K., Employment for the Handicapped. 1967. Abingdon Press, Nashville, Tenn. 272 pages. $5.95. "A guide for the disabled, their families, and their counselors." Sources of help. Preparing to work. Pros and cons of college. Meeting the employer half way. To tell or not to tell. Job training and job opportunities. Government service. A business of one's own.

Robert Hoppock is professor of education at New York University.

*Adapted from: The Bulletin, Vol. 52, no. 326, March 1968, pp. 121-126.

Black, James Menzies and Edith M. Lynch. How to Move in Management.... An Executive's Guide to Changing Jobs. 1967. McGraw-Hill Book Co., New York, N.Y. 234 pages. $6.95. Sound advice for the executive earning over $15,000 a year. Readable. Many anecdotes.

Colgate, Craig, Jr., Editor. Director of National Trade and Professional Associations of the United States. 1967. Columbia Books, 15th and H. Streets, N.W., Washington, D. C. 160 pages. $5.00. Alphabetical list of 3500 organizations. Indexed. Address. Size of membership and staff. Publications.

Colan, Eleanor F., Virginia R. Kirkbride, Kate Hevner Mueller, Marguerite W. Zapoleon and others. Counseling Techniques for Mature Women. 1966. American Association of University Women Educational Foundation, Washington, D. C. 448 pages. The adult woman's history, psychology, education and place in society. Counseling techniques and practicum. Economic aspects of counseling adult women.

Gleazer, Edmund J., Jr. and Paul L. Houts, Editors. American Junior Colleges. Seventh edition. 1967. American Council on Education, Washington, D. C. 957 pages. $14.00. Directory of 751 recognized institutions, arranged by states. Lists of those which provide on-campus housing, offer various curricula, and are church-related. History, control, recognition, calendar, admission, fees, financial aid, curricula, degree requirements, staff, enrollment, student life, library, publications, buildings, grounds, finances, administrative officers.

Hoffman, Lois Wladis and Martin L. Hoffman, Editors. Review of Child Development Research. Volume Two. 1966. Russell Sage Foundation, New York, N.Y. 598 pages. $8.00. Excellent chapter on "Development of Occupational Motives and Roles" by Henry Borow.

Hopke, William E., Editor-in-Chief. The Encyclopedia of Careers and Vocational Guidance. Volume I: Planning Your Career. 752 pages. Volume II: Careers and Occupations. 784 pages. 1967. Doubleday Publishing Co., Chicago, Ill. $32.50. Five articles on career planning; 71 broad articles on major industries or areas of work; 220 articles on 650 specific occupations. Nature of the work, requirements, history, methods of entry, earnings, social and psychological factors, sources of additional information. Bibliography. List of accredited colleges. Duplicates much of the Occupational Outlook Handbook; is twice as long.

Hoppock, Robert. Occupational Information: When to Get It and How to Use It in Counseling and in Teaching. Third edition. 1967. McGraw-Hill Book Co., New York, N.Y. 598 pages. $8.95. The author of this article is hardly an unbiased judge of his own book but he hopes it belongs in this list. It is a college textbook used in the education of counselors.

How to Face Future Success. A Handbook for Detroit High School Students. 1966. Wayne State University and Detroit Public Schools, Detroit, Michigan. 150 pages. Available on interlibrary loan from Wayne State University. Excellent example of local occupational information prepared by local counselors for local students, in a project that could and should be duplicated in every high school. Brief descriptions of 121 "entry jobs that 19 Detroit counselors investigated in summer, 1966." Brief sections on career planning and job finding.

How to Plan a Community Career Opportunities Conference. 1966. Chamber of Commerce of the United States, Washington, D.C. 21 pages. 25¢ College students interview potential hometown employers, who pay $25 to $200 to local chamber of commerce, which organizes conference at local hotel during Christmas vacation. High schools help compile list of students, and use conference to recruit teachers.

Leonard, George E. Developmental Career Guidance in Action, The First Year. 1966. Wayne State University, Detroit, Mich. 134 pages. Available on interlibrary loan from the University Library. What happened when six counselors were assigned to six elementary and secondary schools as "Developmental Career Guidance Consultants" to inner-city youth, parents and teachers. Activities included industrial field trips for 7,000 pupils, group conferences with 50 business experts, work-study programs, etc. Aspiration levels of pupils in experimental schools went up while those of controls went down.

Morehead, Charles G. and Frank G. Fuller, Editors. Career Planning and Development. 1966. Supervisor of Guidance Services, State Department of Public Instruction, Raleigh, N.C. 95 pages. $1.25. Psychological and sociological bases. Practical aspects. Federal legislation. Trips to industry. Current literature. Papers from advanced counselor workshops.

Negroes in Apprenticeship. Manpower/Automation Research Monograph No. 6. 1967. U.S. Department of Labor, Washington, D.C. 38 pages. Free. Extent of apprenticeship. Policies to equalize employment opportunity. Some wins, some losses. Recommendations.

1967-1968 Directory of Approved Counseling Agencies. 1967. American Board on Counseling Services, Washington, D.C. 193 pages. $2.50. Agencies which offer counseling about educational progress, about occupations and careers, and about "other personal concerns not requiring prolonged and intensive psychotherapy." Arranged geographically. Hours, sponsor, services , fees, staff. This publication is recommended because it is "the only directory of its kind." I still have reservations about the adequacy of the criteria for approval of "counseling about occupations and careers," because they do not require the agency to evaluate its services by following up its clients.

Parmenter, Morgan D. Exploring Occupations. 1967-72 edition. Guidance Centre, College of Education, University of Toronto, Toronto, Canada. 128 pages. $1.90. A textbook for high school courses and units on occupations. Chapters on 15 occupational families and the occupations within them. Farmers, fishermen, loggers, miners, craftsmen, laborers. Transport, communication, sales, clerical, managerial, professional, protective, service, and recreation occupations.

Parmenter, Morgan D. Success in the World of Work. 1967-72 edition. Guidance Centre, College of Education, University of Toronto, Toronto, Canada. 72 pages. $1.20. A textbook for high school courses and units on finding a job and advancing in it. Information, suggestions, exercises and projects. Appropriate for courses in occupations, business and industrial education. Canadian job calendar shows best months in which to apply for work in 55 industries.

Parmenter, Morgan D. You and Your Career. 1967-72 edition. Guidance Centre, College of Education, University of Toronto, Toronto, Canada. 144 pages. $1.90. A textbook for high school courses and units on occupations. The occupations and industries of Canada. How to obtain accurate information about occupations, particularly in your own community. How to discover and measure your own strengths and weaknesses. How to match data about yourself with data about occupations.

Pfeil, George W. Guidance Publications in Print. Volume Two, The Job World. 1966. Associated Publishers' Guidance Publications Center, Los Altos, Calif. 78 pages. $1.75. A combination bibliography, catalog and order blank. Title, author, pages, date, price and one-sentence annotation of books and pamphlets on groups of occupations, filing systems, occupational planning and development, vocational counseling and teaching. Unusual sections on night jobs, summer and part-time jobs, small business and unfavored occupations.

Pierce, J. E. Data Processing for Guidance and Counseling Handbook. 1967. Automated Education Center, 560 Book Road, Detroit, Mich. 175 pages. $15. What data processing is, and the services it can perform for counselors. Two pages suggest potential uses in vocational guidance. GRAD system used in placement of college alumni is described briefly.

Staterstrom, Mary H. and Joe A. Steph. Educators Guide to Free Guidance Material. Sixth edition. 1967. Educators Progress Service, Randolph, Wis. 218 pages. $7.50. Classified, annotated list of 489 films, 80 filmstrips, 40 tapes, scripts and transcriptions, 252 bulletins, pamphlets, charts, posters, magazines and books. Of these 341 are new, 345 are on occupational information. Indexed by title, subject and source.

Selected Characteristics of Occupations (Physical Demands, Working Conditions, Training Time). A supplement to the Dictionary of Occupational Titles, third edition. 1966. Government Printing Office, Washington, D.C. 280 pages. $2.75. A convenient table for finding additional information on all occupations defined in the D.O.T.

Slocum, Walter L. Occupational Careers. A Sociological Perspective. 1966. Aldine Publishing Co., Chicago, Ill. 272 pages. $6.00. A summary of sociological theory and research. The meaning of work. Technology and change. Requirements of work organizations. Status. Trends and outlook. Scientific and professional occupations. Education. Mobility. Aspirations. Decisions. Patterns and strategies.

Splaver, Sarah. The High School Student's Guide to Summer Jobs. 1967. Maco Publishing Co., 757 Third Ave., New York, N.Y. 96 pages. 95¢. How to find and apply for a job. Summer hiring expectations of selected employers. Many kinds of jobs in many areas of the U. S.

A Survey of Placement Services Offered by Professional Associations. 1967. Eastern College Personnel Officers, c/o Mary Albro, Career Planning Office, Radcliffe College, Cambridge, Mass. 82 pages. $2.00. Name of association, address, officer in charge, services provided. Arranged alphabetically. Indexed by occupation.

Vollmer, Howard M. and Donald L. Mills, Editors. Professionalization. 1966. Prentice-Hall, Englewood Cliffs, N.J. 365 pages. $7.50. "What are the circumstances in which people in an occupation attempt to turn it into a profession, and themselves into professional people?" Fifty-seven readings on "the dynamics of occupational change. . . the characteristics, antecedents, and social consequences of the process of professionalization as it affects a wide variety of occupations." The editors suggest that "concept of 'profession' be applied only to an abstract model of occupational organization, and that the concept of 'professionalization' be used to refer to the dynamic process whereby many occupations can be observed to change certain crucial characteristics in the direction of a 'profession'. . ."

A. D. LITTLE ABSTRACT ON VOCATICNAL EDUCATION *

Education and Training for the World of Work: A Vocational Education Program for the State of Michigan.

By: Harold T. Smith

Descriptors: Michigan, Connecticut; New York; Pennsylvania; Florida; Kentucky; North Carolina; California; Illinois; Minnesota; Ohio; vocational education; State vocational programs.

Publication Date: July, 1963

The date of this study--July 1963--is crucial; the study predates the Vocational Education Act of 1963. Part I recommends a vocational education program for Michigan. Part II consists of descriptions of the vocational education systems in twelve ... states, including Michigan itself.

The study has an unusual rationale, as indicated by excerpts from the Introduction:

> "Michigan has taken no firm steps toward developing a system of vocational education..."; "For help in determining what to suggest for Michigan...we have looked to experience elsewhere throughout the nation..."; "...this entire report presents, not primarily a set of recommendations emanating from us, but rather, a prediction as to the course of action towards which Michigan will inexorably be forced to move..."; "The experience of other states is making clear what courses of action are necessary, and the time for Michigan to act has arrived."

The author postulates that vocational and technical education must be treated as an integral part of total education; the goal of every public school in Michigan should be to provide reasonable preparation for the student's next step, whether the step is to the work world or to further education or training. The institutions needed to offer such education are "(1) the comprehensive area postsecondary and adult education institution, located ultimately at the heart of every commuting area in the state; (2) the comprehensive high school, which every high school should strive to be; and (3) the cooperative area vocational facility or education center located at the heart of every commuting area that is not yet able economically or otherwise to support a post-secondary institution."

*Little, Arthur D., Inc., "Study of the California State Public School Vocational Education Program", Arthur D. Little, Inc., Cambridge, Mass., January, 1968.

Smith's major thrust is toward the creation of a system of community colleges. To implement this, he recommends Legislative backing, increased financial backing and a State school support cost formula which allows more money for vocational courses, and chargeback arrangements between all segments of public education. Additional recommendations include concentration on the culturally disadvantaged, better facilities, less concentration on crash training programs and more on long-range basic improvement in the total educational system, improved teaching and counseling, and coordinated welfare and training programs.

The vocational programs in the twelve States have been enlarged via VEA 1963, but there is a real question whether the basics have been changed. The industrial States such as New York and Connecticut show an emphasis shift from agriculture to industry/business training. Area vocational schools are a fairly common answer to the problems of expense, and States such as California and Illinois continue to expand their junior/community college systems.

With these modest proposals from the States, Smith's recommendation that Michigan follow the leaders is difficult to understand.

ABSTRACT

By: Jacob J. Kaufman, et al.

Descriptor: The Role of the Secondary Schools in the Preparation of Youth for Employment, Institute for Research on Human Resources, Pa. State University, 1967, 448 pp.

This is the most massive and comprehensive analysis yet made of vocational education in the U.S. Financed by USOE under the Voc. Ed. Act of 1963, the study represents a very large and careful investigation of many relevant aspects of the nation's vocational education system. From this work, Prof. Kaufman derived many substantial conclusions and 19 recommendations, not all of which clearly rest on presented evidence. Even so, this document promises to remain the basic source of data about vocational schools until Kaufman completes his new studies which the federal voc. ed. people have funded consequent to the appearance of this one and of Corazzini's.

Kaufman picked "nine communities which met criteria of size (three 50,000=, three 300,000=, three 875,000 and up), labor force composition, type and quality of vocational programs and geographic accessibility." Within these locations, his people visited 25 vocational schools or vocational programs in comprehensive high schools, they got information on 5,200 graduates of all three (vocational, general, and academic) programs, they interviewed nearly 700 of these graduates, they got comparable data from 3,200 similar graduates by mail, they interviewed some 650 of the

larger local employers and labor union leaders. Kaufman's objectives were (1) "to study and assess, in their actual setting, public (state and federal-aided or reimbursed) vocational secondary school programs and the extent to which they are meeting the needs of the students and the communities," and (2) "to assess the vocational and technical education curriculum in the secondary school when compared with other high school offerings that 'feed into the employment stream', i.e., college preparatory curriculum graduates who do not go to college and graduates from the general curriculum." These objectiv were translated into investigations of vocational education and community needs, general management (administration, guidance, and community relations), and the programs themselves, thence to their adequacy in preparing youth for employment, their image, the comprehensive school vs. the segregated school, the Negro and voc. ed., girls and voc ed., and self-concept in vocational development.

The study's first level conclusions were as follows:

1. The nine communities varied significantly only in size, and all had schools large enough to cope with similar problems in delivering educational programs. In all cases, however, enrollments in voc. ed. were so small as to "negate any impact on manpower needs" and were, in any case, out of joint with labor markets even in the cities, where the range of voc. ed. offerings was greatest.

2. The current system (staff, equipment, facilities, programs, placement) is adequate to get graduates accepted as such by small job shops -- but not necessarily in program-related jobs. Guidance is totally inadequate; industry-labor advisory committees equally so. Voc. ed. lacks relevance and linkages to any economic activity of consequence, though it has begun to develop a few new programs.

3. Vocational students tend disproportionately to come from blue-collar families and to have relatively low IQ's (redundant measures). Their entry-level jobs, however, indicate no real advantage in occupational or monetary terms (and, indeed often require no diploma for employment). Still, voc. ed. graduates tended to be satisfied with their jobs and their preparation.

4. While teachers of all stripes (academic or vocational teachers in either sort of high school), employers, and labor union leaders all supported the idea of voc. ed., the last two groups showed no knowledge of its operations and only teachers of vocational subjects in vocational schools strongly supportod it.

5. "In summary, it can be said that the graduates of the separate vocational schools did look back on their high school experiences more favorably, but they did not appear to be better trained or have more successful work experiences than the vocational graduates of comprehensive schools." Indeed, graduates of no vocational program derived any significant pay-off in the labor market from their training.

6. Negroes tended to benefit somewhat in terms of job satisfaction from voc. ed., but the evidence showed that the entire system (guidance, placement, occupations, wages) discriminated against them at every point. The evidence about voc. ed. for girls (overwhelmingly "business" education) essentially duplicated that for Negroes except that the programs were much more narrowly restricted to the clerical occupations working females "ought" to have.

7. Satisfaction with vocational programs (development of self-concept) appeared more closely allied with long-standing interest and ability in vocational areas and with high IQ than with anything else.

Only once do the general recommendations of this study mention traditional voc. ed. in those terms. The common reference is to a radically changed, much broader, and more widely applicable enterprise -- fifteen recommendations bear on this point in order to respond to student and community needs by expanding offerings, overhauling administration, recasting professional development, coupling with industry, and totally revising guidance, placement, and evaluation. The report specifically took no position on locating this revolutionized operation in comprehensive or segregated schools. The one specific reference to traditional voc. ed. concerned its expansion to more Negroes because it renders them "qualified" for employment.

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Information Center Comments

This last recommendation is pusillanimous; none of the rest are, on their face, constraining.

The case for the comprehensive school may be somewhat stronger than Kaufman made it since he was clear that staff, equipment, guidance, and facilities for voc. ed. were better in small communities than in the largest and that the former had only comprehensive schools. This may, however, be more a function of size than of location. The proponents of the segregated school claim that they can provide better and more various education in it, but they have signally failed, on the basis of Kaufman's evidence, to do so in 50 years.

In the end, it is clear that what industry cares most about is graduation from school (and color of skin); the diploma is really a screening device. What the graduate studied in school is an insignificant consideration by comparison. Indeed, it appears that voc. ed. exists more as an artifact of federal definition than of anything else.

ABSTRACT

By: Arthur L. Corazzini

Descriptors: Vocational Education: A Study of Benefits and Costs (A Case Study of Worchester, Mass.) Ph.D. Thesis, Industrial Relations Section, Department of Economics, Princeton University, Princeton, N.J., pp. 126

This pioneering study was directed by Professor Frederick Harbison, a leading economist of manpower and colleague of then president Clark Kerr. It was financed by USOE under grant through the provisions of Section 4(c) research of the Vocational Education Act of 1963. Its publication, while assured, has been delayed because of the explosive nature of its findings of very high costs and very small benefits in voc. ed. They and their derivation, however, have become generally accepted among manpower economists through the workings of the professional grapevine and the speeches and articles Corazzini has mined from it. His conclusion, however, was quite restrained: "Vocational education in Worcester is an expensive terminal training program.: He is now assistant professor of economics at Dartmouth on leave for 1967-68 to the Brookings Institution, Washington, D.C.

His study pretends to be no more than an analysis of economic benefits and costs of a single community high school system. His findings lead him to question the economic value of the vocational education system in Worcester. Subsequent studies by others about different systems have tended to corroborate Corazzini's conclusions; only Jacob Kaufman at Penn State ("The Role of the Secondary Schools in the Preparation of Youth for Employment," q.v.) has, to our knowledge, gone beyond them to make recommendations.

What Corazzini did was "to assess the economic benefits of the vocational school to the individual graduate and to the local community, and to compare these with the direct, indirect and opportunity costs of maintaining the school. In order to accomplish this objective, the study compares the system's regular high schools with its vocational high schools, giving particular attention to the relative cost of the two types of education.

"...A class of students at the vocational schools is traced through four years of training and subsequent placement on jobs after graduation.

"The starting salaries of vocational school graduates are compared with the starting salaries of those hired directly from regular high school or at the gate. Further, for a sample of firms within the manufacturing sector, the type of entry level job open to vocational graduates is compared with the type of job open to regular high school graduates. Finally, the actual job experience of a sample of vocational graduates, during the first eighteen months after graduation, is presented in order to ascertain the extent to which vocational training is utilized."

The economic value to high school graduates of the options for higher education or for playing the range of the labor market are not measurable on their face.

The benefits of dropout prevention have not been measured fully, only the costs. Corazzini's measure of these costs ranges from $2,990 to $9,365/pupil/year depending on the proportion of the Boys Vocational student body assumed to be saved by attendance there. While dropout rates vary widely with the exact program, the Boys Vocational dropout rate averages 24.9%. The only measure of benefit he made was in difference in lifetime earnings between 11 years of schooling and 12 years of schooling for northern white males. On this basis and assuming that the whole graduating student body had been saved, the benefit/pupil/year was $430, 1/7 of their cost.

Given the four-year duration of these vocational programs, present values can be equated (differential benefits - differential costs) only within 6 years (8-½ average) for the greatest premium, assuming it persists. At the lowest premium ($.04/hr.--in largest firms), these present values never equate at any rate of discount he used (5-10%).

Corazzini did not use his findings as a base from which to attack vocational education; he simply indicated that his analysis posed some hard questions for educational decision makers. (indeed they do.)

Information Center Comments

The high public cost of this system and its low benefits bring the whole system into question. The very small premiums paid graduates of standard vocational programs newly hired by the largest firms suggests the lack of value of those programs to such companies, whose size alone argues for a broad spectrum of employment capability. The relatively high differentials paid such graduates by small firms suggests tight coupling between them and the standard vocational programs. Furthermore, the high public cost of this vocational system indicate that the educational enterprise has wide latitude in cost/pupil for creating and implementing alternative vocational education at the same or less cost and with high benefits.

ABSTRACT

By: Charles S. Benson

Descriptor: Vocational Education in the California Junior Colleges, State of California, Office of the Legislative Analyst, 1967, 32pp.

Charles Benson has written a rich, penetrating, and succinct document, well worth the reading by each member of the team. Benson is a good economist (Princeton, and Columbia Ph.D., 1951) who has, since about 1954, used his discipline in education (Faculty, Harvard Graduate School of Education, 1954-65; Professor of Education and Economics, Berkeley, School of Education and Department of Economics, 1965-). He has written a couple of books, including the standard text on the economics of public education. He spent 1963-64 in England for the Ford Foundation studying English schooling since WW II.

In the study at hand, Benson interviewed top administrators at some 20% of California's junior colleges, major employers of their graduates, "representatives of the apprenticeable trades," the Apprenticeship Division of the State Department of Industrial Relations, and the Vocational Education section of the State Department of Education. He focused on urgent problems and their remedies. Consequently, this brief document raises more questions than it answers, but they are good and manageable questions.

Benson states flatly that California policy for ten years has been to shift "publicly supported occupational training from the high school to the junior college," leaving generalized pre-vocational, industrial arts-type programs in high schools. Furthermore, he says, "the major source of formal training of California's work force is the vocational program of the junior colleges," and some 50% of this force works in industries with uncommonly high rates of technological change. So much for the political-economic side of the situation.

On the individual side, vocational education in junior colleges provides, Benson insists, an essential alternate route for mobile youngsters to high-prestige occupations. It also provides a modicum of the skill and experience which the young need for employment. It is clear that such programs involve a significant segment of the junior college population, but not the dominant one even though it is growing (17.4% between 1964 and 1966 -- 19,700 students).

The California program has what Benson calls strong features--willingness to provide new courses when needed (some 96 new ones last year), a favorable supply of teaching staff, and a high level of demand for graduates. The California program also has some problems:

1. Programs are not coordinated, at least in part because they are set by advisory committees to the separate institutions. This leads to discontinuities from junior

college to junior college, from program to program, from feeder high schools to junior college.

2. The programs themselves are largely undefined in terms of scope and sequence, and there is not clear information about them. Planning, the setting of priorities, and the allocation of resources are, consequently, done in ignorance and irrationality.

3. The matter of second-class status persists in these vocational pursuits.

4. The current offerings are so incoherent that the vocational programs suffer drastic slumps in second-year enrollments.

5. While placement is clearly no problem, guidance and counseling are weak and inadequate, and, as a closely related phenomenon, follow-ups of graduates are non-existent.

6. Programs are often stretched over too many years and pose unrealistic related requirements.

7. Work and study in apprenticeship programs are out of joint and the technical side increasingly weakened.

Benson proposes regional planning and the institution of broad vocational areas of study -- technical (nonapprentice, technologically oriented), trades (apprentice-related), skills training (remedial "band-aid courses). He would strengthen guidance and counseling by the addition of personnel to these functions, and by a significant new attack on placement and follow-up activities. He would establish regional vocational committees to give programs coherence and status. The areas served by these committees should be congruent with those of the new data processing areas.

Information Center Comments

This is a hopeful document, for it indicates progress toward appropriate institutional location of relevant educational functions. The broader, general, pre-vocational work does indeed belong in high schools; the more specific, in junior colleges. Guidance, counseling, placement, follow-up, planning, and coordination are all crucial -- and neglected -- functions peculiarly dependent on sound information systems. The development of larger planning and program service units is essential -- and confluent with ADL recommendations already made. California, then, appears already to be moving in a direction which Benson finds essential.

We need to grapple with the weaknesses inherent in Benson's suggestions:

1. The built-in impossibility of instituting programs tightly and specifically coupled to the demands of industries whose specific labor requirements are as unstable as those of California.

2. The impossibility of producing enough good guidance counselors to carry out this function adequately.

ABSTRACT

A Developmental Program For The Improvement of Trade-Technical Teacher Education In The Southern States.

By: David Allen

Descriptors: Southern States; teacher education, teacher training; vocational teacher training; team teaching.

Publication Date: Not Given
1966? 1967?

This brochure reports activities at a six-week summer institute held at UCLA for fifteen or so Southern (read Negro) teacher educators from selected colleges and universities in the South.

The primary purpose of the conference was to study the Core Program for trade and technical teacher training at UCLA. The theoretical approach was combined with extensive daily field trips to a high school, junior college, skills center, and an instructional materials center.

Seeding from UCLA to the less advantaged Southern Negro colleges was the chief goal.

The eight-month following study shows planned use of 31% of methods and techniques, present use of 59%, and eventual use of 89%.

ABSTRACT

Manpower Policies in a World of Change. The Educational Record, January, 1963.

By: W. Willard Wirtz

Descriptors: MDTA; Federal manpower policies; technological explosion.

Publication Date: January 1963

The author speaks in practical generalities in relating the scientific revolution to national manpower policies. Work opportunities are to an ever-increasing extent based on scientific developments beyond the control of the individual.

Shapers of manpower policies must (1) keep abreast of new technology and (2) develop programs to safeguard in the fullest sense those individuals adversely affected by future technological developments.

Five essential principles of a manpower policy are:

1. Everyone is trainable, e.g., TVA experience.
2. Everyone needs retraining.
3. Training is needed everywhere, geographically.
4. Training methods must be improved.
5. Trainers must be flexible and responsive to conditions of the world of work.

ABSTRACT

Case Study No. 1: Bay Area, California. One World of Science Mathematics, English and Shop.

By: Bernard Asbell, 154 Mountain Road, Witton, Connecticut.

Descriptor: California; Bay Area; vocational education; integrated curriculum; Project FEAST; Richmond Pre-Technical Program, Ford Foundation.

Publication Date: Not Known. 1965-66.

Several years ago teachers in a Richmond, California high school devised an integrated-curriculum approach for middle-ability students who were under-achieving. "At the core of the Richmond Plan is an attempt to end the artificial fragmentation of subject matter that typifies the usual school curriculum. Instead of separating lessons under such unreal labels as physics, mathematics, English and shop, the plan tries to make school work reflect the real world of interrelated knowledge."

This brief paper (24 pages) describes the genesis of the program, states and infers its rationale, cites cases and examples, and touches on problems such as evaluation of the program and means of implementing innovation in public schools.

At writing, the program had spread to 19 schools in the Bay Area and had some 1200 students enrolled. Allied programs such as Project FEAST (Food Education and Service Technology) have been established, and additional programs are on the boards.

In sum, an interesting description of a going program of integrated education which extends well beyond standard classroom walls.

ABSTRACT

Diversification News. Article: Lockheed Technology Project Gets Underway In California Schools.

By: Unattributed: (Article furnished by Don Bowersock of ADL)

Descriptors: Lockheed; culturally disadvantaged children; San Jose Unified School District; California; reading program; California compensatory education; simulation games.

Publication Date: 1967.

The San Jose School District and Lockheed Missiles have joined forces to design a motivational/instructional program for disadvantaged children. Emphasis will be on reading and mathematics.

Inputs will include the "total immersion" method, systems analysis and operations research methods, simulation games, and computer data processing. Study plans will be produced for students, showing the relevance of schooling to Bay Area industry skill requirements. The project is seen as an attack on the low motivation level of the disadvantaged child.

Project Leader: R. C. Flothow, Jr., LMCS.

PART IV

THE CALIFORNIA LEGISLATIVE STUDY ON VOCATIONAL EDUCATION

RECENT DEVELOPMENTS

IN

VOCATIONAL EDUCATION

A Staff Report to the Assembly Education Committee

California Legislature

Hon. Leroy F. Greene, Chairman

December 4, 1968

Gilbert M. Oster, Consultant
Gary L. Wartik, Assistant Consultant
Richard C. Ivey, Legislative Intern
Patricia J. Myers, Committee Secretary

Vocational Education: Education for Employment and Manpower Needs

Summary of Findings:

1. Widespread confusion. Confusion exists as to what is "vocational education: and as to its role in our society? This widespread lack of clarity distorts one's perspective on educational priorities and "educational facts." No policy-making of substance can proceed from such an unsettled foundation.

2. Uncoordinated planning. There has been proliferation of (a) vocational education and training programs, and (b) manpower and employment need studies--but only fledgling progress in relating the two areas, especially at the administrative level. This dichotomy results in uncoordinated, haphazard educational planning for occupational needs. This gap can be shortened.

3. Federally required new state plan. The Vocational Education Amendments of 1968 ("VEA 68") spells no radical changes in California's VE system; that is, planning, programming and budgeting requirements. However, VEA 68 forces the State to make long-range plans and commitments, to re-examine priorities, and to modify or establish administrative structures. For those interested in giving long-range direction to California's VE, this is the year.

Introduction:

Why this study? What are its aims? This staff report has two catalysts: an Education Department study and the Vocational Amendments of 1968. The first raises questions; the second forces answers. The report's object is to deal with both.

For over one year the State's vocational education system has been under study by Arthur D. Little, Inc., as per contract with the State Department of Education. This study, by itself, raises important questions about (1) priorities in the State's education system, (2) those groups serving and being served by vocational education, and (3) the quality of present vocational education efforts.

On the second front, Public Law 90-576 ("Vocational Amendments of 1968") was signed into law on October 16,1968. VEA 68 has generated for vocational education a visibility not quite expected from the Little study. Now Californians are forced to ask and answer basic questions arising from the Little study and other sources. Why? For the State to share in federal program benefits a new state plan, including an advisory board, must be established.

In short, the State must set forth goals and definitions where confusion exists, must strengthen or modify relationships where weaknesses or breakdowns are known, and must provide financing and leadership where local jurisdications are demonstrably inadequate. The findings and policy alternatives of this staff report take aim at

these problem areas.

This is a staff report. The conclusion's are based upon interviews, first-hand observations, and a survey of the literature. No attempt has been made to link its finds and conclusions to views of Committee Members, either as individuals or as a whole.

Findings:

1. WIDESPREAD CONFUSION.

What is vocational education? Generally speaking, VE is job oriented, and as such is differentiated from "academic" and "general" education. And VE's success or failure can be measured by breakdowns of both unemployment rates and manpower needs. That is, VE has as its distinguishing feature "education for manpower and employment." So much for general direction.

What is meant by VE in terms of state organization and its role in our society? Just where is the confusion?

a. Confusion within the VE system. VE can be identified by the clientele groups and occupations it serves and the parties serving as vocational educators. But there is so much variety in just these categories that, unless one pinponts a specific program, he is likely to get bogged down in sweeping generalities or esoteric program jargon--a contrast to many liberal arts programs. CAMPS (Cooperative Area Manpower Planning System) lists over two dozen programs

and servicing agencies involved in VE--at every level of government, both private and public.

Confusion or complexity? There are programs for the hard-core unemployed, underemployed, youth, older-unemployed, women, depressed ethnic areas, handicapped, farm-unemployed, apprentices, institutional inmates, and so on. Agencies which participate in VE are primarily the Department of Employment (recruitment, placement) and the Education Department in conjunction with local school districts (instruction). Other major agencies which are involved at the planning, referral, coordination, or fiscal levels include the State Departments of Industrial Relations and Social Welfare, and the U.S. Department of Labor; Housing and Urban Development; and Health, Education and Welfare. As there is no single overall VE government agency (either now or in sight), the web of responsibility and authority continues to grow in complexity. And this picture is confusing to accountants and lay government officials. For example, the education of California VE students comes from two sources--the general education fund and federal-local monies--a contrast to other states.

b. Confusion within the "occupational education system. Where does one draw the line between apprenticeship training, vocational education, and professional education--let alone between any one of these and "academic" education? These categories are constantly changing, mostly due to the status

of the particular occupations. For example, what is the position of the occupation in society? How much formal education is required at entry level? Is the occupation regulated and by which interests?

Vocational education in California, generally speaking, is administered under a state plan by the Department of Education. All programs are under public supervision or control, and they are geared to occupations which do not require a baccalaureate degree. Federally aided programs include the following occupations: agriculature, home economics, health, office, technical, trade and industry, and distribution. Instructional facilities include high schools, junior colleges, and adult and evening schools.

Apprenticeship training and professional education are not "vocational education" in terms of VEA 68. The former is a joint labor-management effort, under supervision of the State Department of Industrial Relations. The professions by comparison require the high levels of formal education for admission into their programs. This usually means a four-year college degree.

But note: All three share a common educational foundation: motivation for learning, skills for learning, and social skills.

c. Confusion about academic versus vocational education. Academia has traditionally occupied the educational spotlight at the expense of vocational education. Thus

the latter's needs have remained publically unnoticed. A high school, even a comprehensive one, is considered a college prep school. Plant, curriculum, instruction, counselling, guidance, administration, post-graduation tracking and feedback, and placement are usually geared to the college-bound, only a minority of whom will attain the baccalaurate. ("Statistically in California, out of every 100 students entering 5th grade--about 15 finish 4 year college."--p.141, October, 1968--Arthur D. Little Study) Society's educational commitment to the bulk of the primary and secondary school student body remains in the shadows of those few who demonstrate academic or professional potential. Result: A whole educational system is geared to only a small portion of society's manpower and employment needs.

d. Confusion about VE quality. The majority of secondary students who find themselves "academic rejects" (either by lack of motivation or aptitude) do not wish entrance into a "second-best" program--or a dumping ground for low-income minority groups. So only a small number enrolls in high school VE programs, and the majority leaves or graduates without a marketable skill.

VE program success rarely get the attention enjoyed by academic ones, so few high school students and

parents are aware of the vocational opportunities available (No wonder the soaring youth unemployment rates). Thus quality VE is associated with the junior colleges, which have more public visibility, greater curriculum and instructional flexibility, better financing, better guidance, and a good record for placement. And many of these junior college programs are of high school level.

Secondly, VE teachers and government officials--contrary to popular notions--have unusually high professional education requirements. Unreasonably high entry standards close the VE teaching profession and government service to competent business leaders and skilled labor, many of whom would give VE the favorable image and publicity it needs due to academic competition.

2. UNCOORDINATED PLANNING

How can waste and duplication be avoided in planning vocational education and training programs? The answer is neither a short one nor a simple one. There is a certain amount of inefficiency and ineffectiveness inherent in matching educational programs to occupational needs--especially with our decentralized economy. Further, there are such "unaccountables" as changing technology, industrial and labor mobility and variety of markets, to name just a few. However, modern data and communication systems and advancements in management techniques can provide the basis for shortening the gap between need projections and educational programs. What evidence is there that the gap can be shortened?

a. Lack of coordination in research. In California two recent studies were released: (1) "Manpower Guidelines for Educational Policy Planning in the State of California," by Professor Nicholas DeWitt of the School of Economics in Indiana, and (2) Vocational Education in California: Yesterday, Today, and Tomorrow, by Arthur D. Little, Inc. Both reports bring out the following points: First, no State agency--at the operative level--integrates both occupational need analyses and educational programs. That is, the Employment Department does one and the Education Department does the other. There is no integrating such authority under one head in order to lessen the dicholomy. Second, both studies indicate weaknesses in California's occupational-educational system, but neither points to gradual processes

by which the problems might be corrected. DeWitt says that no accurate recommendations for future manpower needs are possible because of the lack of information by permanent State agencies. He gives us only one alternative: a new statutory agency which would combine both occupational and educational approaches. The Little study, in brief, reports that the academic-vocational dichotomy distorts educational priorities in the public school system to the great disadvantage of non-college bound youths. VE programs are dumping grounds for academic rejects. And even the better VE programs are lacking in good basic educational support--in contrast to the academic programs. Little states that a change of educational philosophy is at issue. Other than basic curriculum changes (changing the books doesn't necessarily change the teachers!), there are no alternative mechanisms for gradual correction of the problems. What are the implications of various changes in State organization, budgeting priorities among the several levels of education, the roles of industry and labor at the various levels (city, county, region) in VE decision-making?

The impact of this uncoordinated research is startling. No guidelines are established to have needs related to recommendations at the operative or practical level. And most significant, neither seemed to be aware that federal legislation was pending for a major revision of state VE programs.

Other research projects which have enjoyed great visibility are the Essex Report ("The Bridge Between Man and His Work") by the 1968 U.S. Advisory Council on Vocational

Education and the Greenlaugh Report ("Opening the Doors: Job Training Programs") by the Federal Committee on Administration of Training Programs. The Essex Report is really qualitative in nature and makes no claim to match occupational needs with educational planning. Rather the study comprehensively reviews and evaluates current national vocational and technical education programs. It is required reading for the citizen who seeks background information and an in-depth discussion of VE legislation, trends and basic concepts. The Greenlaugh study is a brief summary of federal training programs. Though some focus is on management techniques, most of the report is superficial. But it claimed no more inasmuch as it was a short report.

b. Lack of research relevance. A 1965 Conference on Occupational Data Requirements for Education Planning (held at The University of Wisconsin: Center for Studies in Vocational and Technical Education) underscored the extent of ignorance reflected in occupational demand studies, especially as to their "being utilized in the counseling of students or in the establishment of particular programs and courses." (--p. 11, Proceedings of the Conference). And yet thousands of dollars are being funneled into research projects in California without the slightest hint as to their direction or utility. No sound business would tolerate such laxity.

In California there are three major parties (at least) which are involved in VE research whose direction remains unknown. The University of California, the Federal Government,

and the State of California. Research is taking place at the University but the studies are not in conjunction with the kind of graduate programs which give shape to the field. The public university has relegated to lowest importance its commitment to providing for the education of VE teachers and M.A. and Ph.D. candidates--people who can provide leadership for the bulk of the population which is sacrificing for academia.

The Federal Government is financing California research through the Department of Labor, Housing and Urban Development, and Health, Education and Welfare. In surveying the various research topics (e.g., the Labor Department's "Manpower Research Projects") one wonders what the relevance of such studies are to meaningful educational and occupational planning at the state level. This point was especially emphasied at the May 10th Congressional Hearings in Los Angeles on the Vocational Education Amendments of 1968.

The State Department of Education is going into the library business in the collection of microfilm abstracts on vocational education. The system is called ERIC. On the other hand, the State has established in its University system undoubtedly the finest and largest library system ever assembled by man. Why is the Education Department competing with the most professional library system in the country?

c. <u>Lack of coordination at the operative level</u>. In a given area there is no geographic operating authority or

responsibility for the public management of occupational education in relation to assessed occupational needs. That is, who is responsible for the matching of the two--even on an approximate basis? There is the federal program: Cooperative Area Manpower Planning System (CAMPS). This linkage is founded on voluntary cooperation. No budgetary authority or hierarchy is featured in CAMPS. At the State level, cooperation among agencies has brought about as much effectiveness and efficiency as could be expected. The performance of the State civil service is second to none, given the relationships governing its work. However, Sacramento cannot be expected to have the insight that local jurisdictions have over problems peculiar to their area. It is amazing that local industry-education councils are not delegated more VE authority and responsibility. (Note how much influence the professions have over graduate school curricula!)

3. FEDERALLY REQUIRED NEW STATE PLAN. The Vocational Education Amendments of 1968 (VEA 68) spell no radical changes in California's VE system; that is, for the near future. Such are the realities of statewide planning, programming, and budgeting requirements. However, VEA 68 forces the State to make long-range plans and commitments, to re-examine priorities, and to modify or establish administrative structures.

a. VEA 68 guidelines-unfixed. P.L. 90-576 signed into law in October 1968 a $3+ billion authorization (not appropriation). This law in effect consolidates all

previous legislation on the subject. The law allows for much administrative latitude but also stipulates many categories of priorities and minimum percentage allocations. For example, special programs for the disadvantaged must be funded at specified floor levels. But the matching fund requirements have been made more flexible. However, all these guidelines are being refined in Washington. A major feature of VEA 68 is the federal mandate for a state advisory council. Its creation previously was optional. Congress specified that it must be operative and federally approved 90 days before the State makes application for federal funds.

The Advisory Council is not just another paper body. It is appointed by the Governor, and it must review and approve the State VE plan before its submission to the State Board. It holds public hearings and evaluates annually the State's VE system. Though the State Board of Education is the sole administrative or operating agency, its State Plan must be a joint product of both the Board and the Advisory Council. The emphasis is on long-range planning (3-5 years).

b. <u>VEA 68 and new state priorities</u>. By itself, the Arthur D. Little study could focus public attention on basic problems in California's VE system. VEA 68, in effect, mandates the state not only to examine these issues but to come up with some answers fast. In other words, no State Plan, no federal grant monies. The policy alternatives

which are open to Californians in their structuring of the Plan are stated in the following section.

Policy Alternatives:

1. Meeting the challenge of widespread confusion. No doubt the process of formulating a State Plan will serve to clarify many if not most ambiguities as to where responsibility and authority are located in the State's VE system. And California has an opportunity to shape overall responsibility for occupational and educational needs. What can be done?

a. Statutorily distinguish occupational education problem areas ("vocational," apprenticeship, and professional) in terms of the responsibilities of the various State Departments. Modifications can be made or authorized. Coordination can be structured in terms of hierarchy or budgetary authority. Possibly a joint policy-making committee could be established.

Also, for accounting purposes, all State monies directed to VE related activities (including ADA) should be listed. The present accounting system gives the state a poor image, expecially when applying for federal grants or public support.

b. "Academic versus vocational" confusion! Several directions are possible. Local community involvement helps to balance traditional academic visibility. This can take the form of local and regional VE advisory councils. Their status can range from solely advisory, to serving as a

"business-government-education" liason (e.g., Pacific Telephone and others' "Bridging the Gap" Project), to formulating local and regional "little State Plans" (note: many California counties are more populated than some states now forming Advisory Boards.), to partial or whole allocation authority for their jurisdiction, to nomination of State Advisory Board members for selection by the governor, etc. These can be established on a timetable or pilot project basis.

c. The University of California can begin to own up to its educational responsibility to society by matching graduate programs (e.g., M.A. and Ph.D. programs in manpower development and training) to research benefits. This has been done in the area of "city planning" and "industrial engineering" and other less academic disciplines. Legislation can specify that no institution should receive but a small portion of research monies unless it offers leadership programs in manpower and occupational development and training. Such leadership programs can include teacher training, and M.A. and Ph.D programs. Priority should be given to those institutions which encourage enrollment in these programs, i.e., earmarked student financial aid, fellowships, research assistantships and so on.

d. VE quality in the high schools can be made public knowledge if concrete steps were taken to maximize educational efforts for the majority of students. If VE teachers and counselors are unable to sell VE to non-academic students, then VE leadership courses should be established and funded to help equip school staff to meet the challenge. Industrial-

education councils or advisory boards can be recognized by law and encouraged to motivate students to learning a meaningful skill. Junior colleges can be authorized and encouraged to accept qualified high school students in their VE courses--just as is the case with academia. Much course duplication would be eliminated. VE teachers can be encouraged (e.g., salary raises) to enroll in manpower and employment need courses, especially those which conduct need surveys. Such surveys could be collected and published where possible, thus saving the State extra expense. Industrial-education councils might be encouraged to contibute their efforts.

e. The exclusiveness of the VE "Profession" can be made more positive. Rigid and unreasonably high entry requirements into the VE teaching profession and State civil service can be modified. VE teaching certification authority can be delegated in whole or in part to legally constituted local or regional advisory boards or industrial-education councils. The State Advisory Board might formulate modern standards for competence in the State's VE Division. Thus business and industrial leaders may contribute their efforts to the government side of VE programs; that is, if they are qualified to be state employees.

f. Legislation can specify, within federal guidelines, priorities within the State's VE budget: institutions--high school programs, junior colleges, adult and evening schools, and private schools (under public supervision); occupations--trade and industry, office, technical, health, distribution, agriculture, home economics; clientele--

by age, sex, ethnic group, handicap, geographical agea, population distribution. Where is maximum impact needed at the state or regional level? Needs can be determined and priorities earmarked according to the State and/or Regional Plans.

g. All the traditional tools and techniques to maximize the potential of high school academic programs can be experimented with in the VE sector. Orientation programs and field trips, tracking systems for the graduates or dropouts, compensatory education, public awards and honor rolls, scholarships, expert counseling, tutoring services and so on. Much cooperation might come from industrial-education councils and from the public university leadership programs.

2. <u>Meeting the challenge of uncoordinated planning</u>. No planning process is perfect, and change cannot always be accounted for. But the aim should be effective and efficient programming.

a. The State Advisory Board can provide leadership for much of the manpower and VE occupational education studies conducted in the state. The present scope centers too much around the Education Department's perspective. Their high quality research should be tied much more to labor market studies.

b. The State Department of Education can be asked to explain how its ERIC system (a state VE library) duplicates University Library efforts. Are there less expensive alternatives? Can the University or State Library provide the same service at less cost?

c. Planning for manpower and employment needs should match vocational education program efforts. Administration at the state level should be modified so that manpower-education planning is linked to operations. There are several planning alternatives: functional consolidation of Divisions on an inter-agency basis; establishment of joint policy committees chaired by personnel from the Department of Finance (or equivalent); and delegation of authority to local and regional industrial education bodies or advisory boards. Private VE schools enjoy much success because of their ability to coordinate efforts (responsiveness to the labor market and quality VE instruction).

d. Establishment of a state budgetary floor upon which local jurisdictions can make VE plans. Many times the Congress appropriates according to a time basis which conflicts with local school district planning (i.e., the school year). The state could guarantee a minimum of funds to be made available to localities pending Congressional appropriations.

--Consideration might be given to the potential of the following Assembly Bills:

Statewide testing. A.B. 1168 (L. Greene, D-Sacto.) provides for statewide testing of pupils in grades 6, 8 and 12 to measure intelligence, physical performance and achievement in basic skill and content courses. This new law is designed to give an assessment of student and school district performance. As vocational education programs vary according to the assumed

prerequisite aptitudes, this measure will indicate how well students are being prepared for the various kinds of occupations. Score data can be instrumental in shaping sagging VE programs, some of which fail solely because of inadequacies in the "3R's".

Regional VE planning. A.B. 827 (Crandall, R-San Jose) was a proposal to create vocational regions--together with regional committees and regional VE "master plans". The community colleges and the Employment Department would have a top priority in planning and administering the State's VE system. The Governor vetoed the measure pending completion of the Arthur D. Little study of California's VE needs.

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The above publications are on file in the office of the Assembly Committee on Education, Room 3112, State Capitol, Sacramento, California 95814. Extra copies for personal use can be arranged through the Committee office or by writing the publishers as mentioned above.