Vocational educational needs at the secondary level in the Fresno City Unified School District are evaluated as part of PROJECT DESIGN, funded under ESEA Title III. The main sources of information used in the study were reports of the city and county of Fresno; conferences with school administrators, supervisors, teachers, and students; and a review of curriculum guides for industrial arts and vocational subjects that are used in the Fresno schools. A matrix of educational needs was established by the study and the following major findings were reported: (1) A lack of articulation between departments and between school levels, especially in vocational education, exists in the school system. (2) The total educational program lacks flexibility for innovation by teachers. (3) More attention must be given to the problems caused by de facto segregation in the school system. (4) Vocational counseling must be upgraded through better preparation of counselors. (5) Classroom teachers should be given a larger role in decision making. (6) Finally, vocational education must be viewed as a method of instruction and of learning as opposed to preparation for some specific employment. (LN)
EDUCATIONAL NEEDS

24. VOCATIONAL EDUCATION

FRESNO, 1968
FREE CITY UNIFIED SCHOOL DISTRICT

1968

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and human relations

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The work presented or reported herein was performed pursuant to a Grant from the U. S. Office of Education, Department of Health, Education, and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.
FOREWORD

PROJECT DESIGN (Inter-Agency Planning for Urban Educational Needs) was organized as a two-year project to develop a comprehensive long-range master plan of education for the Fresno City Unified School District in California.

This project was conceived by school leadership to bring under one umbrella current major problems of the schools, the relationship of the schools to the broader community, the impact of educational change now occurring throughout the nation, and a fresh view of the educational needs, goals and aspirations of our youth and adults. The ultimate purpose of the project is to weld into an integrated plan the best use of available resources to meet the totality of current and projected needs according to their rational priorities.

The United States Office of Education funded the proposal as an exemplary Title III project, recognizing the urgency for developing better planning processes for urban school systems. The first year of this project was organized to assess current and projected educational needs in the urban area served by the Fresno City Schools. Planning procedures will be carried out in the second project year.

A major dimension of the Needs Assessment is an analysis of educational and urban factors by a Task Force of specialists. This report is one of the Task Force Needs Assessment publication series. See the next page for the complete list of project Needs Assessment publications.
PROJECT DESIGN
NEEDS ASSESSMENT PUBLICATIONS

1. Brainstorm - Needs Perceived by School Staff
2. Speak-Up - Needs Perceived by Community
3. Student Speak-Up - Needs Perceived by Secondary Students
4. School Staffing
5. Analysis of Achievement
6. Problems Perceived by Educational Leadership

County Schools Survey
7. Vocational Occupational Needs Survey (published by County
   Regional Planning and Evaluation Center - EDICT)
8. Other County School Needs Survey Reports (by EDICT)

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EMIL O. TOWNS:  
- A.B. University of California, Los Angeles, 1929-1931  
- M.A. University of Southern California, 1931-1932  
- Ed.D. University of California, Los Angeles

Position:  
- California State Department of Education  
  (Chief, Bureau of Junior College, Education, 1961-1965) (Retired)  
- Educational Consultant (1965-Present)

Offices Held:  
- President, Rotary Club  
- Santa Monica Chamber of Commerce  
- President, YMCA

Member:  
- National Education Association (Life)  
- Phi Delta Kappa (Life)  
- American Vocational Association (Life)  
- National and State Retired Teachers Association

Honors:  
- Listed in Who's Who in American Education  
- Invited by German Government to lecture on Georg Kerschensteiner on occasion of Centennial Celebration

Publications:  
- "Beginnings of German Instruction in the United States," Modern Language Forum, XVII (October, 1932), 117-122  
- "Factors Pertinent to German Instruction in the Junior College," Modern Language Forum, XXIII (May, 1937), 1929-1937  
- "Der Einfluss von Georg Kerschensteiner auf die Berufsschulbildung in den Vereinigten Staaten," Wirtschaft und Berufserziehung, VI (June, 1954), 117-113  
- Miscellaneous publications, California State Department of Education
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I. INTRODUCTION - INITIAL CHARGE

*Project Design*, Task Force No. I consists in part of a number of specialists assigned to various aspects of the educational program of the Fresno City Unified School District for the purpose of assessing its effectiveness in meeting "learner needs".

**Assignment.** It was obviously necessary, therefore, that specialists assigned for this purpose concentrate on well defined areas of the educational program in order to arrive at information in readily useful form and to avoid unnecessary duplication. The procedure to be followed and the organization of the study were outlined in "Product Specifications"¹, explained and supplemented by the Project Director in several conferences.

The present writer was assigned the general area of *vocational education* with the reminder that the subject of *adult education* needed to be coordinated with the specialist assigned to that area of investigation. This was done with the understanding that the present report would make only passing reference to adult education and that the specialist in adult education would include vocational education for *adults* in his report.

The **Outline** of the Product Specifications specifically includes:

1) scope and sequence of learning requirements for students and adults;
2) assessment of extent to which each student and adult type is meeting requirements; 3) identification of unmet learning needs by learner types;

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¹"Project Specifications", a mimeographed Outline prepared by Edward E. Hawkins, Project Director, dated 3/8/68. 6pp., and revised 6/3/68. 7pp.
and (4) identification of other needs related to each unmet learning need arranged according to the matrix established for the first phase of the Project.

It is important at this point to emphasize that the "first phase" of the Project consists only of identifying learner needs and problems, not solutions!

Orientation. It immediately became apparent that other studies had been made or were being made which had direct implications for the present report. Limited time did not permit a complete and original study of vocational education in the Fresno City Unified School District. Neither did it seem reasonable to ignore other studies, all of which contained useful information. Several days, therefore, were spent in reviewing previous studies and reports and meeting the persons involved in, or knowledgable about them. (Appendix A)

II. EXPERIMENTAL DESIGN

Procedure. Considering the limited time available (15 days) for the study and report, the nature and extent of information already available, and the Project Specifications, it became clear that the procedure needed to be one of identifying and reporting information which would to some degree, at least, supplement previous and concurrent studies in order to accomplish a more comprehensive description of the present educational program in the Fresno City Schools and to assess its effectiveness in meeting "learner needs".

2See Bibliography for list of publications used and Exhibit A for persons interviewed and consulted.
Such an assessment would, of course, require a "scope and sequence of learning requirements which students and adults should achieve in order to function effectively in the future urban society ..." as suggested in the Outline of Project Specifications. This statement of "learning requirements" was prepared by the writer and represents his own criteria for evaluating educational programs. They are based on what he considers basic human needs upon which all educational or learner needs need to be based.

Organization. The "Suggested Report Outline" has been used as a guide for the organization of this report. Most of the information which was gathered appears in Section V, Historical Detail, and in Section VI, Methodology Detail.

Limitations. There were some serious limitations encountered in this study quite apart from the limitations of time. Several other studies had been made and were in the process of being edited. The county Project EDICT, under the direction of Melbo and continued by Harrison and Nixon were not available. The preliminary manuscript on vocational education by Harrison and Nixon of Fresno State College was reviewed and found helpful. Another survey which would have been helpful was being made by the State Department of Employment. It was an area survey of employment trends. All the data had been sent to the Sacramento office for processing and only the questionnaire which had been used was available for review. The report will not be available until July.

On or about April 26 another study was authorized, involving the City and County of Fresno. This investigation will be done by the MERI Corporation and is provisionally titled "Cooperative Planning for Occupational Education in Fresno County", which obviously concerns the
schools and the program of the Fresno City Unified School District. It proposes "to develop, with the assistance and cooperation of the participating districts and agencies, a feasible plan for strengthening occupational education in Fresno County," and its first objective is "To identify the specific needs within Fresno County which require new and innovative occupational training programs for those youth and adults who are being inadequately served by existing programs in the county".

The principal sources of information for this study and report, therefore, are prepared reports of the City and County of Fresno, conferences with school administrators, supervisors, teachers, and students as time would permit. Curriculum guides for so-called industrial arts and vocational subjects being used in the Fresno schools were thoroughly examined. The most recent WASC Accreditation of the six high schools was also reviewed.

Three independent schools were visited: Pacific College (Mennonite), Fresno Technical College and Central California College of Commerce. This was done to provide a more complete description of the opportunities for vocational education in Fresno City. Other public supported schools were also visited: Fresno City College and Fresno State College.

Finally, it seems important to bear in mind that this study is concerned only with secondary schools and only with so-called Vocational Education, distasteful and confusing as the term may be to this investigator.

III. MAJOR CONCLUSIONS

This study has resulted in a number of conclusions which are listed here:

1. The Fresno City Schools are faced with serious financial problems.
2. The school district has shown courage and determination in solving its educational problems.

3. Serious problems of de facto segregation, especially in West Fresno, need to be considered as top priority.

4. Educational program is highly organized and too inflexible to permit innovation by teachers.

5. Teachers, though interested, are inadequately prepared to cope with needed instructional revisions.

6. There is a lack of articulation between departments and between school levels, especially in vocational education.

7. Because of shifting enrollments, more studies should be made cooperatively by City and County of Fresno.

8. Much more needs to be done in adult education.

9. A large portion of the many drop-outs can be identified before they reach the seventh grade.

10. Vocational counselors need better preparation.

11. Classroom teachers should have more effective part in school and district decision making.

12. The three-track sectioning of classes (remedial - normal - superior) should be examined and evaluated.


14. More and well qualified personnel is needed to improve job placement, Vocational work experience, and student follow-up.

15. The many community agencies, organizations, and interested individual leaders can be much more helpful if efforts are
coordinated and concentrated on specific tasks that are most needed. Project Design may be able to accomplish "Interagency Planning" on a continuing basis.

IV. CLASSIFICATION MATRIX

A. IDENTIFICATION OF EDUCATIONAL NEEDS

1. SOCIETAL STANDARDS (Human Needs)

   a. Physical-Biological: Physical health (intelligent diet, exercise, and relaxation); development and coordination of muscles (large and small muscles, eye-hand coordination); accident prevention; experience with spatial relationships, form, color, weight, volume, sound, odor, taste, touch, balance, rhythm; normal sexual development and personal grooming (cleanliness).

   LEARNING SEQUENCE
   (to vocational preparation)

   Elementary grades: (a) emphasis on variety of physical activities; (b) rest; (c) activities to identify and test sensory equipment; (d) identification and treatment of physical defects.

   Intermediate grades: (a) increased emphasis on eye-hand and muscle coordination (practical arts), rhythm, general exercise; (b) drawing, writing, painting; (c) refinement of sensory functions; (d) identification and treatment of physical defects.

   Junior High: (a) continuation and intensification of physical development; (b) increased emphasis on eye-hand coordination; (c) refinement of concepts of weight, volume, touch (identification of materials and forms); (d) normal sexual development (puberty).

   Senior High: (a) Emphasis on practical applications of eye-hand coordination (industrial arts); (b) concepts of weight, volume,
touch (identification of materials and forms); (c) normal sexual development (adolescence); (d) identification of special abilities.

b. **Social-Cultural-Political**: effective use of English (reading, writing, speaking); ability to get along with others, accept responsibility, mutual acceptance and respect (especially among peers), self-confidence, participation in group activities (social, cultural, political); some understanding of American political system of government, law, justice, and system of courts.

---

**LEARNING SEQUENCE**

(related to vocational preparation)

**Elementary grades**: (a) greatest possible number of experiences, telling and writing about them, reading; (b) emphasis on group activities, sharing of responsibilities; (c) learn and obey school regulations, traffic laws; (d) acquaintance with protective agencies (fire, police departments, garbage disposal, street cleaning, etc.); (e) music (vocal), drawing, painting, dramatics; (f) number concepts (counting, elementary functions of arithmetic); (g) get acquainted with community institutions (library, museum, churches, parks, etc. - make simple maps to locate them); (h) elementary experiments in sciences, (i) identify and treat withdrawal tendencies.

**Intermediate grades**: (a) continue emphasis on language arts, include use of library, dictionary, encyclopedia; (b) continue group and committee activities (emphasis on inter-racial); (c) more concentration on social, cultural, and political institutions and activities (emphasis on community); (d) mastery of elementary functions of arithmetic (add-subtract-multiply-divide) applied to practical
problems; (e) introduction to practical elements of science (physics, chemistry); (f) familiarity with common weights and measurements (practical applications); (g) experiences in art, drama, music, etc. 

Junior High: (a) continue emphasis on language arts; (b) add individual projects to group activities (emphasis on individual interests and talents); (c) continue experience in solving practical mathematical problems (introduction to algebra and geometry, understanding of "base 10" number system); (d) broaden experience in sciences (physics, chemistry, agriculture, biology); (e) construction and interpretation of graphs, charts, tables, maps, drawings; (f) experiences in arts (music, literature, drama, drawing, etc.); (g) intensification of social studies (economics, history, social institutions).

Senior High: (a) continuation of all junior high school studies; (b) add concepts of other base numbering systems for those with special interests and skills in mathematics; (c) add more individual projects in all subjects to encourage special interests and talents or skills (everyone must excel in something); (d) emphasis on practical understanding of political, legal, and social institutions (supported by extra-curricular programs-student organizations, individual projects, interested groups).

c. **Economic:** Understanding of American "free enterprise" system, ability to contribute to production of economic goods and services; pride in accomplishment and good workmanship; practical use and application of mathematics and science; knowledge and use of common weights, measurements, tools; understanding of changing economy and "world of work"; ability to manage personal business and financial
affairs; familiarity with sources of information and assistance in securing employment; understanding of contracts and other common legal provisions.

**LEARNING SEQUENCE**

*(related to vocational preparation)*

**Elementary grades:** (a) group activities - getting along with others; (b) elementary (base 10) number operations: counting, adding, subtracting; (c) knowledge and use of common (household) weights, measurements, tools; (d) understanding of rules, regulations, laws that affect child's life.

**Intermediate grades:** (a) continuation of group activities (including knowledge of division of labor in world of work); (b) extension of skill and knowledge in use of arithmetic (practical applications); (c) experimentation with practical application of principles of science; (d) experiences in practical arts (appreciation of form, color, design, skills).

**Junior High:** (a) introduction of Industrial Arts (emphasis on design, form, color, materials, workmanship); (b) mastery of basic functions of arithmetic, practical problems involving elementary algebra and geometry; (c) nomenclature, care, and use of simple tools, measuring instruments, materials; (d) practical application of principles of science; (e) occupational information and guidance; (f) identification of special interests and skills (student must be able to do something well); (g) further instruction about American institutions (emphasis on economic and legal).

**Senior High:** (a) add vocational courses to industrial arts (emphasis on general areas of skills and knowledge) metal trades,
electrical, automotive, office, distribution, health services, graphic, accounting, public service (fire, law, etc.);

(b) special emphasis on applied math, science, language arts;
(c) information and expert counseling regarding employment requirements and opportunities; (d) cooperative work experience;
(e) personal business and financial management; (f) how to find employment and advance (opportunities for continuing education), including discussion of organized labor and self-employment.

d. Spiritual: (a) devotion to moral and ethical principles;
(b) personal character traits of honesty, integrity, dependability;
(c) concern for others, community service; (d) concern for enduring values; (e) study of individuals who have influenced history (emphasis on current and recent persons of various ethnic groups).

**LEARNING SEQUENCE**
*(related to vocational preparation)*

Elementary: (a) our dependence on others for growth, security;
Intermediate: (b) importance of individual contribution to general welfare;
Junior High: (c) examples of important contributions by individuals,
Senior High: (d) study of lives and contributions of "great men" of all races and their influence on history.
IV. CLASSIFICATION MATRIX

B. REQUIRED OPERATIONS AND FUNCTIONS

1. CLASSROOM TEACHERS

   a. Physical-Biological: Junior High. Teacher and counselors need quick and easy techniques for identifying physical deficiencies in vision, (e.g. color blindness), balance, muscular coordination, manual dexterity, diet, hearing, and spacial relationships. Freedom to improvise.

       Senior High: Teacher and counselors need quick and easy techniques for identifying physical deficiencies in vision, (e.g. color blindness), balance, muscular coordination, manual dexterity, diet, hearing, and spacial relationships. Freedom to improvise.

   b. Social-Cultural-Economic

       Junior High: Teachers must be able to identify and overcome withdrawal tendencies. Building a good self-image and a "feeling of belonging" (acceptance by peers) is a critical need at this age and teachers need special methods and techniques for accomplishing these. "Ability grouping" needs study and evaluation by teachers.

       Senior High: Teachers must be able to identify and overcome withdrawal tendencies. Building a good self-image and a "feeling of belonging" (acceptance by peers) is a critical need at this age and teachers need special methods and techniques for accomplishing these. "Ability grouping" needs study and evaluation by teachers.
c. **Economic:**

**Junior High:** Ability to do something **well** is important to each student. Teachers need to be "talent scouts" and able to use the curriculum to "accent the positive" -- provide opportunity to succeed! Teachers can combine forces by articulating instruction in various subject areas (e.g. language arts, math, science, drafting, and vocational subjects). Project method, properly integrated, can be helpful.

**Senior High:** Ability to do something **well** is important to each student. Teachers need to be "talent scouts" and able to use the curriculum to "accent the positive" -- provide opportunity to succeed! Teachers can combine forces by articulating instruction in various subject areas (e.g. language arts, math, science, drafting, and vocational subjects). Project method, properly integrated, can be helpful. Integration of practical business methods, economics, legal matters, and shop management - designed for vocational students would strengthen program.

d. **Spiritual**

**Junior and Senior High:** Provide classroom atmosphere and activities which foster mutual acceptance and respect.

2. **INDIVIDUAL SCHOOL ADMINISTRATORS**

a. **Physical-Biological**

**Junior High:** Provide opportunity and encouragement for teachers to experiment and innovate in detecting and treating physical inadequacies as suggested for teachers. The Physical Education program can make a major contribution to the pupils success in total education
program by concentrating on the details of physical fitness but all teachers need to become involved in the concern about the physical condition of pupils. Special or serious cases must, of course, be referred to specialists.

**Senior High:** Provide opportunity and encouragement for teachers to experiment and innovate in detecting and treating physical inadequacies as suggested for teachers. The Physical Education program can make a major contribution to the pupils' success in total education program by concentrating on the details of physical fitness but all teachers need to become involved in the concern about the physical condition of pupils. Special or serious cases must, of course, be referred to specialists.

b. **Social-Cultural-Political**

**Junior High:** Provide opportunity and encourage all teachers to be concerned about pupil's pride, self-respect, need for acceptance and acceptance and respect by his peers and others. Approaching adolescence - the "storm and stress" period - requires attention to basic human needs more than academic standards. Curriculum guides must not restrict teachers' freedom to experiment and improvise.

**Senior High:** Provide opportunity and encourage all teachers to be concerned about pupil's pride, self-respect, need for acceptance and acceptance and respect by his peers and others. Approaching adolescence - the "storm and stress" period - requires attention to basic human needs more than academic standards. Curriculum guides must not restrict teachers' freedom to experiment and improvise. Every student's opinion of himself, his attitude toward others, and his outlook on life are more important to his future than accumulated knowledge.
The school administrator's influence on the faculty is strategic.

c. Economic

Junior High: The administrator can assist in breaking down the concept that knowledge and skills essential for the occupations of "less than college" grade can not be included in every class and every course. He can encourage and assist in curriculum development which has immediate practical applications in the pupil's life without weakening its cumulative effect on continued education. Vocational education needs to be viewed more as a method of instruction and learning than as preparation for a specific job.

Senior High: The administrator can assist in breaking down the concept that knowledge and skills essential for the occupations of "less than college" grade can not be included in every class and every course. He can encourage and assist in curriculum development which has immediate practical applications in the pupil's life without weakening its cumulative effect on continued education. Vocational education needs to be viewed more as a method of instruction and learning than as preparation for a specific job. The ability to apply subject matter to immediate problems and interests of a student is a basic "learning need" of all students. The school administrator can encourage and assist in a multi-disciplinary approach to curriculum development and instructional methodology. This will require extensive in-service training of teachers.

d. Spiritual

Junior High: The administrator can encourage extra-curricular.
activities of a "community service" nature. (e.g. cleaning school yard, improve landscaping, stronger students assisting weaker students in lesson assignments, etc.)

**Senior High:** The administrator can encourage extra-curricular activities of a "community service" nature. (e.g. cleaning school yard, improve landscaping, stronger students assisting weaker students in lesson assignments, etc.)

3. **SCHOOL DISTRICT ADMINISTRATION**

The School District Administration (Superintendent and Board of Education) can assist in meeting "learner needs" in secondary schools in several ways:

1. Adopting policies relating to curriculum and instruction
2. Working cooperatively with teacher training institutions
3. Providing financial assistance for the schools
4. Working cooperatively with local, state and federal agencies.

More specifically, the following comments seem appropriate:

a. **Instructional Policies:** Provide time and opportunity for school administrators and staffs to develop inter-disciplinary approaches to subject areas in the curriculum for the purpose of abandoning the traditional notion that vocational education is something different, separate and apart from other instruction. The most significant feature of the Vocational Act of 1963 is that it makes possible - even encourages - the departure from traditional and outworn concepts of vocational education!
b. **Teacher Training Institutions:** must be told by school districts what they need and want in the pre-service and in-service preparation of teachers.

c. **Financial Assistance:** for the schools is a greater problem in Fresno City than in many other school districts. At the same time, increased State and Federal funds are becoming available, but a schedule of priorities is still needed. Improvement of Instruction to meet better the "learning needs" of all students must always be the main concern. This applies particularly to West Fresno. More effective use of already available funds can be accomplished.

d. **Community Cooperation:** The school district administration must take the leading part in coordinating the efforts and funds of so many community agencies. Project Design is a first effort in this respect. It should be thought of as the initial step in a continuing effort to make more effective use of all the community resources. In some instances, Fresno City and County schools should work jointly because of presently and seemingly continuing shifts in population.

Nothing specifically has been discussed in reference to so-called **Adult Education.** This subject was be discussed by another specialist. It seems appropriate to mention here, however, that limited opportunities for continuing education may have a direct bearing on the passage or failure of school bond elections as well as raising the educational and cultural level of the community.

Parent education, training and re-training for jobs, and leisure time activities are not the only contribution that adult
education can make. These activities involve persons who can contribute personally and directly to the solution of educational problems in the district. People seem to have time and money for things that are important to them, but they tend to resist things which they do not understand and which, therefore, seem relatively unimportant. Community education or adult education thus takes on special significance when problems of finance and educational programs arise.

4. PARENTS AND HOMES

The parents and guardians of school-age youth can and should play a much more active part in developing and maintaining the instructional program. Communication seems always to present the main problem. A weekly "Newsletter" prepared by each school and carried home by each pupil might be worth the additional effort and financial cost which that might involve.

Personal visits by teachers or other school staff would cost more and might be more effective in creating and maintaining interest and support or cooperation in the homes. One thing is certain: the absence of it makes satisfactory progress of pupils much more difficult!

More and better opportunities for community or adult education needs to be viewed as an important medium for the discussion and solution of many school problems. PTA and other civic groups frequently lack appeal because they do not provide opportunity for active participation by their members. They need a personal challenge. "If you want a friend, give him an opportunity to do something for you" is good psychology. He will be interested in his investment!
5. **COMMUNITY LEADERS**

   As mentioned under School District Administration, schools must involve
   the entire community not only in providing financial support, but by the
   contribution of personal or organizational support in other matters.
   It seems important that the School District Administration should assume
   the leadership in soliciting, organizing, and coordinating such efforts.
   Too much time, money, and effort is wasted because of the independent and
   unrelated but well intentional efforts of individuals, agencies, and
   organizations.

   **Employers** are usually interested in making a contribution to the
   community and need only to be given specific, manageable opportunities.
   Work experience education can be vastly expanded. "Earning while learning"
   can contribute significantly to the education of all youths, especially
   those looking forward to full-time employment upon leaving school.
   Coordination between the school and the employer **sine qua non** for such
   programs. Where labor organizations are involved, it should be under-
   stood and agreed that full-time employment concerns them only when the
   student terminates full-time school attendance and it should in no way
   affect his proper and adequate preparation while in school.
V. HISTORICAL DETAIL

In order to assess the effectiveness of an educational program, it is necessary to consider at least some of the facts of history and present situation which tend to determine its development and its probable trends in the future. The economy of a community - its business and commercial development - determine to a large extent the trends in population, housing, taxation, social and cultural institutions, and educational facilities both public and private.

From its inception, Fresno was the center of a vast and productive agricultural area extending throughout the San Joaquin Valley. Employment opportunities were plentiful and many required little in the way of formal education. People of various racial origins came in increasing numbers - Japanese, Chinese, Filipino, and a variety of other Orientals and Polynesians.

In 1872, the Southern Pacific Railroad extended its route through this valley and erected a depot in Fresno on the East side of the tracks. None could have foreseen what a determining influence upon the growth of the city this might have. The City of Fresno, with its business establishments, residences, cultural and social establishments grew up on the East side of the tracks, leaving the West side to be occupied by laborers, migratory families, and single family businesses. This area is commonly referred to as "West Fresno".

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3A Profile of the Population and Housing in the Fresno-Clovis Metropolitan Area, p.30.
Today, Fresno City is one of the major west coast convention centers with a population of more than 240,000 spread over an area of 75 square miles. It is located on major railroad and highway arteries connecting Los Angeles, San Francisco, and Sacramento. It serves as an important wholesale and distribution center for the San Joaquin Valley encompassing six counties.

Employment. A general description of the economic structure of the Fresno community is indicated by the labor market reports of the State Department of Employment.

**TABLE I**

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Total Employment (all Industries)</td>
<td>139,075</td>
<td>144,500</td>
<td>152,700</td>
<td>155,100</td>
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<tr>
<td>Non-Agricultural</td>
<td></td>
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<tr>
<td>Manufacturing</td>
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<tr>
<td>Durable goods</td>
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<td>5,150</td>
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<td>6,000</td>
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<td>Nondurable goods</td>
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<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining &amp; Agric.</td>
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<td>1,900</td>
<td>2,000</td>
<td>1,500</td>
<td>1,500</td>
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<tr>
<td>Contract Const.</td>
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<td>6,675</td>
<td>6,575</td>
<td>6,800</td>
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<td>7,850</td>
<td>8,125</td>
<td>8,200</td>
<td>8,800</td>
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<tr>
<td>Wholesale &amp; Retail</td>
<td>30,975</td>
<td>30,975</td>
<td>31,975</td>
<td>32,800</td>
<td>33,700</td>
</tr>
<tr>
<td>Finance, Ins. &amp; Real Estate</td>
<td>5,200</td>
<td>5,200</td>
<td>5,272</td>
<td>5,400</td>
<td>5,600</td>
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<td>Services</td>
<td>23,125</td>
<td>22,900</td>
<td>23,700</td>
<td>25,100</td>
<td>26,000</td>
</tr>
<tr>
<td>Government (all kinds)</td>
<td>20,350</td>
<td>20,200</td>
<td>21,025</td>
<td>21,100</td>
<td>25,200</td>
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<tr>
<td>Total Unemployment</td>
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<td>15,425</td>
<td>18,100</td>
<td>18,000</td>
<td>18,200</td>
</tr>
<tr>
<td>% of Labor Force</td>
<td>9.5</td>
<td>9.6</td>
<td>8.6</td>
<td>8.4</td>
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</tr>
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</table>

*Task Force Introductory Study Data, P.1*

*Fresno Labor Market Bulletin (selected monthly reports).*
A number of things need to be pointed out in these statistics and others which seem pertinent. "Since 1960, the Fresno Urbanized Area has been increasing in population at the rate of 10,000 to 11,000 persons per year and now (1964) accounts for more than 90% of the total net growth in the Fresno County." In October of 1963, according to the same report, 245,000 of the 280,000 in the Fresno-Clovis area were living in the Fresno Urbanized Area, the greatest increase in population being in the North-East Section of the area.

The statistics provided by the Department of Employment indicate a total employment in January, 1968, of 155,100 persons compared to 139,075 in 1964 - an increase of about 4,000 per year. The month of January has been arbitrarily used as the one least affected by seasonal employment. It will be observed that an average annual increase in the civilian labor force of 4,000 compared with an average increase of 10,000 in the total population suggests considerable unemployment. In fact, the Department of Employment estimates this to be 9.5%, 9.6%, 8.6%, 8.4% and 8.4% for the five years included in this study.

Changes in the economy are indicated by little or no increase of employment in the production of goods (farming, manufacturing, construction, and mining) but considerable increases in transportation, communication, utilities, wholesale and retail sales, real estate, finance, insurance, services (all kinds) and especially in government (city, county, federal). While production in most instances has increased in quantity, the increased use of automation and technology is diverting the labor force to the

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6 A Profile of the Population and Housing in the Fresno-Clovis Metropolitan Area, p. 22
7 See Table I
operation, maintenance and repair of machinery and equipment and all types of service, such as in the health and distribution occupations.

**Housing and population.** There appears to be a positive relationship between the level of education of the head of the house and his income, value of the home, and homogeneity of the housing area. "Most young families in Fresno prefer new homes in new subdivisions because they can be purchased with little or no down payment, provide a 'good environment' in which to raise a family, and are convenient in their layout and facilities." 8

At the lower socio-economic extreme are the minority group areas of West Fresno. Here we find the lowest educational attainment of the population, the highest ratio of unskilled and unemployed persons, the lowest income, the lowest home values, and the greatest proportion of unsound housing says the same report. According to the 1960 census, "94% of the Negro population, 41% of the Oriental population, and 33% of the Mexican population was concentrated...." Nineteen of every twenty Negroes, which comprise 6.25% of the population, live in West Fresno. 9 The report further points out again that "the characteristics of education, employment, income, and home value are closely related to one another", a correlation of .9. Thirty-eight percent of the households in the Fresno area have an annual income of less than $5,000. 10 According to the Fresno City "Vocational Education Budget Proposal", the 1960 U.S. Census of Population provides the following statistics:

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8 *Op. Cit.* A Profile of the Population and Housing...p.12
10 *Task Force Introductory Study Data*, p.1
1. Of 82,023 families
   16,903 have annual incomes of less than $3,000
   52,560 have annual incomes of $3,000 to $9,999
   12,560 have annual incomes of $10,000 or more

2. In Fresno County, 4.8% are Negro
   5.2% are Oriental
   16.8% have Spanish surnames
   In South Fresno, 15.4% are Negro and
   17.5% have Spanish surnames

3. Of persons over 25 years of age
   25.3% in the County have less than
   an 8th grade education
   31.3% in South Fresno have less than
   an 8th grade education

Racial and ethnic composition. There was a time when groups of
Armenians, Chinese, German, Italian, Japanese, Mexican-American, Negro,
and Russian-German families maintained themselves in isolated subcultures.
Today, there has been an assimilation of all groups into the total pop-
ulation with the exception of the Negro and to a lesser degree the Mexican-
American". Minority groups comprise 27.65% of the total population.

Educational trends. Like most all of the larger urban centers,
Fresno City is experiencing serious problems of keeping its schools
abreast of new and changing demands. Some of the more important and also
more difficult problems are caused by:

1. A fairly rapid transition from a predominantly agricultural
economy to a highly diversified urban center.

2. A consequent increase in employment requiring post-high

\[^{11}\text{Fresno City Unified School Districtwide Vocational Education Proposal}\]

School Year 1968-69.
school education and a decrease in unskilled and semi-skilled occupations.

3. A serious public school finance situation: over-all income per pupil (a.d.a.) is $50.00 less than the State average; sixteen school buildings which need to be brought up to California Field Act standards by 1973.\textsuperscript{13}

4. Rapidly increasing costs of facilities and educational programs.

5. \textit{De facto} segregation (e.g. West Fresno) resulting from changing neighborhood growth patterns and urban developments. (22 schools are designated as "compensatory education" schools. All of these have concentrations of "minority group" pupils, of which eight have more than 90%; 6 elementary, 1 junior high and 1 senior high school.)

\textsuperscript{13}Ibid, p.3
VI. METHODOLOGICAL DETAIL

A. BASIC HUMAN NEEDS

Vocational Education needs to be viewed as an essential and accepted ingredient of the total educational program and of every student. A statement of basic human needs may be helpful in explaining this statement. As a basis for this discussion it seems useful to consider four general areas of basic human needs. Since "needs of learners" will constitute the principal basis for assessing educational opportunities, this framework for discussing basic human needs is also appropriate.

1. Physical-Biological needs are present at birth and continue through the life-cycle. They include: nourishment, shelter, clothing, security, sexual satisfaction and reproduction, and such other things which contribute to physical growth and development.

2. Social Acceptance refers to the need to be loved and respected by others. — the feeling that someone cares. It is the absence of such feeling that constitutes one of the principal reasons for school "drop-outs". In his recent book The Drop-outs: Causes and Cures, Cervantes says:

"Considering the built-in student-teacher tensions that exist within the American School System, it is understandable that superficial role relations are the mode rather than encompassing friendship relations....

As direct proof that the teacher does not elicit the confidence of the youth who come under his tutelage even in matters relating to school we have the fact that only one out of sixteen youths conferred with anyone of their teachers on the critical issue of leaving school."  

3. **Economic Independence** refers to the desire to be independent of others for a livelihood - to "do it yourself" as far as making a living is concerned. It includes also the desire and satisfaction that is associated with contributing something useful to society - to justify one's existence. No normal person wants to be a social parasite.

4. **Spiritual**, for want of a better term, refers to a sense of need to serve a significant goal which is of an enduring nature. It may find expression in a religion, in a social or political philosophy, a work of art, or some other cause which is not necessarily related to the mundane problems of personal survival. Some may call it the desire for immortality. Personal integrity, honesty, dependability, concern for others, community service are illustrative of spiritual needs.

These are the general areas of basic human needs against which the assessment of educational opportunities for learners in so-called vocational programs will be made in this study. They constitute a "comprehensive list of learner requirements" as suggested in the Product Specifications.

B. **LEARNING SEQUENCE**

With the basic human needs as a criteria for general learning requirements, the following sequence of learning and development will serve as more specific criteria against which to assess learning opportunities.
1. Pre-School. There are those who believe that a child's habits, attitudes, and learning potentialities are largely determined by the time he is six years old. Be that as it may, his pre-school experiences can contribute significantly to a successful school experience: confidence in the love of his parents, a feeling of personal security, development of language skills, coordination of muscular skills, playing with other children cooperatively, eating and dressing without assistance, and developing an interest in learning. Development of communication skills and desirable personality traits have vocational implications.

2. Grades 1 to 3. In addition to continuing the pre-school experiences, the primary grades can contribute to a more extensive experience in adjusting to school routines, getting along with other children, making personal friends, and learning to read and write. Leadership characteristics, muscular dexterity, and special interests or talents may become evident. It is of special importance at this age to detect progress or difficulty in the language arts (reading, writing, speaking) and in arithmetic. They have important implications for further success in school and for occupational potentials.

3. Grades 4-6. Continued emphasis on language skills, fundamental processes of arithmetic, muscular development and coordination, and the improvement of social skills are important at this age. Detection of difficulties in these areas and their treatment are
especially important. A grading system which determines grade promotion is indefensible at this age.

Practical application of acquired skills and knowledge should be introduced during this period of schooling in order to develop concepts of weight, measurements, properties of materials, design, and elementary principles of physics and chemistry. These might well be incorporated as elements in the total curriculum in order to create an awareness among pupils of the tools, materials, and processes of the production and distribution of economic goods, distribution and services as part of "the world around us" and as an introduction to "the world of work".

4. Grades 7 - 9. Junior High School is in some respects the most critical period in the educational experience of the pupil. Early adolescence is a time characterized by "storm and stress" in the life of the individual. He seeks friendship, understanding, sympathy, and acceptance at a time when he doesn't understand his own urges, emotions, and ambitions which are frequently in conflict. He is confused and uncertain about many things at a time when he requires respect, acceptance, freedom of action, and friendship. It is during these years that the potential school dropout is frequently determined.

It is a period, however, when individual interests and abilities can be nurtured. These are predominantly of a practical nature. He evaluates instruction in terms of personal and immediate usefulness. He questions the value of information,
skills, and knowledge that will be useful sometime in the future. Education has been defined as "learning to do well the things which one will do anyhow". This applies particularly to the budding adolescent.

He can, and needs to develop the skills and knowledge necessary to accomplish things which are important or meaningful to him. These include, in most cases, the further development and application of basic skills in communication (speaking, reading, and writing), mathematics, and science. Instruction in these subjects needs to be applicable to practical interests. Mathematics, for example, must help him to solve meaningful problems. Reading, must contribute to learning about things of immediate interest. Science must help him to understand the structure and operation of tools, equipment, and physical objects. These learnings have a direct relationship to the choice and development of occupational subjects. So-called "Industrial Arts" instruction can be very useful in developing skills, knowledge, information, and attitudes essential to general occupational areas.

5. Grades 10 - 12. Senior High School instruction needs to be effectively correlated with the junior high school program. The ability to do something well is just as important to the student as the limited ability in a variety of things - possibly more so! Pride in workmanship and the satisfaction of doing something well have educational values also.
The high school graduate should have a facility with mathematics, reading, and communication which are adequate to meet minimum requirements for employment or further preparation for industrial and technical occupations as well as for higher education. This can be accomplished by an integrated instructional program, beginning in the elementary grades, which includes practical applications and references to occupational problems throughout the curriculum.

6. Community College. Successful employment is practically impossible without a high school education. Technological developments are so rapid that education beyond high school is already necessary for the majority of employment opportunities. The junior or community college is uniquely qualified to provide the additional occupational preparation which is needed.

It must be remembered that unemployment and underemployment are both of serious concern to the American economy. Quoting Venn:

At the present time only one student in ten leaving the educational system without a bachelor’s degree has some specific occupational preparation. This is only a small fraction of the real student potential for occupational preparation within the educational system.

As a group these represent 75 to 80 percent of all our youth, and the educational preparation and occupational well-being of this group will in large measure determine the course of this nation in the difficult years ahead.

At all educational levels, these unprepared school-leavers entering the work world represent a waste of vital talent. Consider the high school dropout. The image of the dropout is of a dull, rebellious young person. Yet study after study has shown no substantial difference in intelligence between the dropout and his
age group as a whole; a recently completed study showed, for example, that two-thirds of them were in the IQ range of 90 to 109.\footnote{Venn, Grant, Man, Education and Work. American Council on Education, Washington D.C., 1964. p. 23.}

In referring to higher education he says:

When the dropouts from the four-year colleges and graduates of junior college academic programs do not find meaningful entry jobs, they experience under-employment rather than unemployment, and the under-employment of those with some college study heightens unemployment among those with no college work.\footnote{Ibid, p. 14}

The continuous, integrated, and coordinated emphasis does not preclude the inclusion of more general or liberal arts in the instructional program. Vocational Education must develop skills, knowledge, habits, and attitudes which are essential for successful employment. It can also be viewed as a practical approach to instruction in which related instruction can be introduced to both broaden and deepen the vocational care. English mathematics, science, and other subject matter, with some effort and imagination, can be effectively included, which, at the same time, prevents the vocational program from becoming too highly specialized in technologies which are constantly changing.

There is no substantial evidence which indicates that a broad, general, liberal arts education must be achieved before high school or college graduation. There is some evidence, however, that this is the kind of instruction which is causing most of the
loss of interest among the majority of school leavers. It would seem reasonable to assume that meeting individual needs in the normal order (as indicated in the Introduction) would be a better assurance of students continuing their education when the interest or sense of need suggests it.

Continuing Education. Life-long learning has become more than an opportunity. It has become a necessity for most people. Even though mass media of communication (radio, TV, periodicals, and newspapers) have increased greatly in variety and influence, there is an increasing need for organized instruction in a school environment.

Among these needs is so-called basic education, instruction in reading, writing, speaking, and arithmetic for adults who are functional illiterates. The importance of such instruction in occupational preparation is indicated by the fact that state-federal vocational funds may be used to pay all or at least part of the costs of such instruction when it is essential for a program of vocational instruction.

Retraining and upgrading is increasingly necessary because of the displacement of workers by technology and the appearance of new occupations. Where cognitive learning is essential, constant and continuous learning has been made necessary by the "knowledge explosion". It has been said, for example, that within 15 years an engineer will find 90% of what he had learned to be obsolete. Similar statements have been made about medicine, the physical sciences, and many other areas of human endeavor.
Leisure Time is increasing also for all employed persons and for "senior citizens" who have left the labor force. With increasing life expectancy, many are seeking new forms of financially remunerative activity. Some are seeking opportunity for occupational preparation. Others are seeking constructive and interesting activities to occupy their leisure time and look to part-time continuing education programs to acquire new skills or to perfect neglected ones.

Universities and Four-year Colleges. Although advanced higher institutions of learning are not of direct concern to this assessment there are indications that these institutions are on the threshold of significant changes.
Some of the information which has been useful in adding perspective to this study is indicated in the following pages.

**Fresno City School Enrollments.** The total enrollments in the schools of the Fresno City Unified School District for the month ending 22 March 1968 were 62,325 (56,443 in grades K-12 and 5,882 adults) which were distributed as follows:

- 32,036 enrolled in grades K-6 (53 schools)
- 12,985 enrolled in grades 7-9 (14 schools)
- 11,422 enrolled in grades 10-12 (7 schools)

**K - 12**

Comparable enrollments in grades K-12 in 1967 were 56,108. Net increase in enrollments over last year was 335, or about .6%. Half of this gain (171) was in the high schools. It will be noted that the total enrollments in grades 10-12 are 1,563 less than in grades 7-9, indicating a separation or dropout rate of 12% in the high schools. No analytical study of dropouts in the Fresno City Schools was available but a study of the other 16 high schools in the county was made by the County Schools Department for the school years 1963-64 and the two following years which provide some insight into the problem. These studies indicate that the dropout rate compared to total enrollments in each grade (9-12) was heaviest in the eleventh grade.

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17 Dropout Study, (1965) and Dropout Study Follow-Up, (1966). The 1966 study summarizes the three-year studies and is used here.

18 Op. Cit., p. 5
 Grade | % 1963 | % 1964* | % 1965*  
-------|--------|--------|--------
   9   | 8.4    | 5.3 (16.6) | 4.5 (16.3) |
   10  | 8.6    | 6.9 (16.6) | 4.6 (16.8) |
   11  | 9.6    | 7.1 (17.2) | 6.6 (17.3) |
   12  | 6.7    | 6.5 (17.9) | 4.6 (18.3) |

Approx. Cumulative Totals:  
33.3  
25.8  
20.3  

* The mean ages of those leaving school in 1964 and 1965 are given in parentheses for each grade level. B is for Boys, G for Girls.

About 75% of the dropouts were below grade in reading and about 70% were below grade in arithmetic.\(^{19}\) It would not be appropriate to apply these statistics to the Fresno City Schools but, in the absence of comparable studies in the Fresno City Schools, we may at least assume that the county studies reflect to a considerable degree the conditions in the City of Fresno. Students tend to dropout of school as they approach the end of compulsory attendance at age 18, and the large majority are deficient in reading and mathematics.

It is significant that the mere effort to learn more about school dropouts in the County has led to definite efforts to reduce them. Promising innovations are underway: curriculum revisions, school-home cooperation, more and better counseling, appropriate extra-curricular programs, work-experience programs, greater community participation, better articulation with elementary schools, and in-service teacher training.

\(^{19}\) Op. Cit., p.13
improvement programs. Of special interest is an experimental two-year technical science and mathematics program for high school juniors selected from the middle 50% of the class. Upon graduation, they will enter the junior college to continue a technical course to prepare for a position as a technician. 20

The schools and the program with which this study is primarily concerned are the following Fresno City Schools: 21

1. Bullard High School, 1967-68, enrollment 1398
2. Edison High School " " " 707 (9th grade exclude
3. Fresno High School " " " 2319
4. Hoover High School " " " 1684
5. McLane High School " " " 2603
6. Roosevelt High School " " " 2260
7. DeWolf (Continuation) " " " 270
8. Fresno Adult School " " " 5982

Since limited available time did not permit a personal examination of each school, the latest accreditation reports were reviewed in some detail. Comments of school administrators were quite brief and too general in nature to be very helpful. Comments by teachers and students, however, were quite specific and revealing and provided useful information. Pertinent notes are given for each of the six high schools. No such reports were available for DeWolf and the Adult School.


21 Enrollments given are those of the school month ending March 22, 1968.
Bullard High School (1966) was established in the Fig Garden area in 1955. About 3% of the pupils live in labor camps or exist on welfare stipends. Modern homes predominate - some in the $75,000 class. At least 65% of the graduates continue their education.

Industrial arts classes are offered the aim of which are "to acquaint the student with a variety of experiences....and to provide each with the opportunity to experience and develop individually some of the basic skills used in industry". No follow-up program is maintained to determine the effectiveness of the program for graduates or for early leavers.

The objectives of instruction in mathematics "are obviously the same for all students".

Edison High School (1968). This irregular shaped high school district is the smallest one in the City School District. About 50% of the graduates continue their education. There is general concern about integrating the school with other schools in the district. Teachers complain of lack of opportunity to innovate in their teacher education program.

Industrial arts classes are offered as well as vocational, the most successful of which are auto mechanics, body and fender repair, secretarial and graphic arts.

Students and teachers agree that "more emphasis should be placed on vocational classes to help the student develop a skill for a decent job after high school" and that "less emphasis should be put on college entrance requirements". More emphasis on career and vocational guidance

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22 Date of the accreditation report is given in parentheses.

23 There is only one Caucasian pupil in the school. 85% of the families represented are on welfare, half of them second and third generation.

Many girls are pregnant or have one or two children. (Confidential info.)
is also desired.

Fresno High School (1965) About 57% of the graduates of the last three years continued their education (percentage is probably higher). The Home Economics Department "tries to correlate with the English, social studies, mathematics, physical education, and science departments at all times". No coordination time is provided for the department head. Industrial arts classes are not considered vocational but "students who qualify may attend a one-half day vocational program at the City College". In mathematics "there is no direct correlation with other departments." In the Senior Arithmetic classes (a review course in fundamentals for low achievers) "experts in various trades are occasionally consulted". A special committee has developed a new text. During the fourth quarter students use an occupational math workbook.

Hoover High School (1967). About 58% of the graduates continue their education. The stated school objectives are to develop student occupational competencies "that will enable them to meet business standards and advance to higher job levels". However, only one vocational course (Auto I) is offered and many students are turned away. Many curriculum committees are composed of both junior and senior high school teachers. Students' reaction: "The school offers outstanding facilities to the student in all areas of vocational education."

McLane High School (1964) About 61% of graduates continue their education. Community is predominantly middle and upper class—only a small percent of non-white. Some seniors attend shop classes at Fresno City College.
Articulation between departments could be improved. Program of studies is inadequate for terminal students. Students seeking part-time work are referred to Youth Employment Service.

Roosevelt High School (1964). About 40% of graduates continue their education. There has been a sharp increase in "the number of bilingual and socio-economically deprived students". Our high school" has little to offer to a non-achiever in academic subjects". A student receiving 3 "F's" in any quarter is placed on academic probation". If the situation does not improve, "the student is dropped from school as a non-achiever. He is then placed on the waiting list for DeWolf Continuation High School.

Open enrollment has been adopted by the Board of Education.

De Wolfe (Continuation)High School. No accreditation reports were available for this school. A very flexible program of studies is provided in an informal situation. Emphasis is placed on subject matter related to students' employment. Attendance is considered to be good.

A fairly good idea about the destination of high school graduates who continue their education is presented in the following statistics included in the accreditation reports.
<table>
<thead>
<tr>
<th>HIGH SCHOOL</th>
<th>TO UC</th>
<th>TO FRESNO STATE</th>
<th>OTHER 4-YEAR</th>
<th>JUNIOR COL.</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>BULLARD</td>
<td>61</td>
<td>238</td>
<td>51</td>
<td>219</td>
<td>569</td>
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<tr>
<td>ERISON</td>
<td>5</td>
<td>40</td>
<td>4</td>
<td>242</td>
<td>(289)</td>
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<td>FRESNO (3 yr.)</td>
<td>63</td>
<td>379</td>
<td>39</td>
<td>495</td>
<td>976</td>
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<tr>
<td>MCLANE</td>
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<td>227</td>
<td>9</td>
<td>450</td>
<td>698</td>
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<tr>
<td>ROOSEVELT (2 yr.)</td>
<td>17</td>
<td>243</td>
<td>32</td>
<td>430</td>
<td>722</td>
</tr>
</tbody>
</table>

|                | 163   | 1194            | 138          | 2158        | 3653   |

Summary: About 60% go to junior college, 32% to State College, 4% to other 4 year colleges, and 4% to University of California
A closing statement seems appropriate at this point. Most important to this writer was the desire to present a point of view regarding public education in general and vocational education in particular which is intended to encourage a necessary re-evaluation of traditional or current practice and terminology. No criticism of the Fresno City Schools in intended. Emphasis throughout has been placed on possible approaches to the improvement of public education. The least progressive of all our community institutions is the public school and at the same time it is increasingly relied upon to assure or promote "equal opportunity" for all of its people. Young people everywhere are reminded that our educational institutions are out of time with the facts of modern life.

In many respects, this report is incomplete and possibly incoherent. This is due, in part at least, to a limited time schedule and the need to conform to an organizational pattern somewhat different from that which the writer would have contrived. Extensive reorganization of his original report may have resulted in some imperfections which may be less distracting if the entire report is read.

A clue to the writer's orientation and point of view is included in the following quotation:

"...If we tried to teach children to speak according to our own theories and methods and schedules as we try to teach reading, there would be as many stammerers as there are bad readers. Besides, it has been shown that whatever is useful in the present eight-year elementary curriculum can be learned in four months by a normal child of twelve. If let alone, in fact, he will have learned most of it by himself."
Since we have communities where people do not attend to children as a matter of course, and since children must be rescued from their homes, for most of these children there should be some kind of school."

In continuing his discussion of more effective school policies and procedures, the author continues:

"in the adolescent and college years, the present mania is to keep students at their lessons for another four to ten years as the only way of growing up in the world ... Most, including most of the bright students, do better either on their own or as apprentices in activities that are for keeps, rather than through lessons. If their previous eight years had been spent in exploring their own bents and interests, rather than being continually interrupted to do others' assignments on others' schedules, most adolescents would have a clearer notion of what they are after, and many would have found their vocations. 25

Bibliography

I. Orientation

1. **Product Specifications.** A mimiographed Outline of 6 pages, prepared by Project Design Director, March 8, 1968.


4. **Maximizing Human Potential.** A Vocational Education Symposium (multilith), 20 pp. January 17, 1968. EDICT - Regional Planning and Evaluation Center, Fresno County Department of Education. Dr. Gerald A. Rosander, Director.


II. The School Community

9. **Summary: The Population and Economy of the Fresno-Clovis Metropolitan Area.** (mimiographed), 16 pp.


III. The Educational Program


20. Fresno County Schools, Dropout Study Follow-Up. (A comprehensive report of the efforts being made by secondary schools to combat the problems of dropouts in Fresno County), Fresno, California: September 1966, 40 pp.

21. Accreditation Reports (WASC)

Roosevelt High School (1964)
Bullard High School (1966)
Hoover High School (1967)
McLane High School (1968)
Edison High Schools (1968)
Fresno High School (1965)
IV. Supplementary Readings


EXHIBIT A

LIST OF PERSONS INTERVIEWED

State Department of Employment
Mr. Al Boutte and Mr. Latta - Fresno Office
Mr. David W. Jones, Labor Market Analyst, Sacramento

Non-public Schools
Harold W. Williams, Director, I C's - Fresno
Manuel DaCosta, President, Fresno Technical College
Glenn H. Warren, Secretary-Treasurer, Pacific Technical College

Fresno City Unified School District
Robert Hansler, Director, Vocational Education and Practical Arts
Robert W. Pengilly, Coordinator of Mathematics
Richard N. Helm, Director, Business Education
M. Marty Santigian, Administrative Assistant
Mary Belle Maxwell, Director, In-Service Education
Ruben C. Granados (Edison High School) and
R. John Solo, Principal

Fresno County Schools
Dr. Frank Gurley, Research Consultant
Donald W. Fowler, Coordinator, Vocational Education
Dr. Gerald Rosander, Director, Regional Planning and Evaluation Center
Jerry Phillips, Associate
Ruben Barrios, Association of Mexican-American Educators
Dr. James E. Solt, Director of Secondary Education

Fresno City Hall
James Aldridge, Model City Program
Yoneo Ono, Planning Associate

Organized Labor
Admiral O'Rear, Central Labor Council
Manuel Lopez, Building Trades Council

Fresno City College
Stuart White, Superintendent, State Center Junior College District
John S. Hansen, Assistant Superintendent
Dr. Clyde C. McCully, President, Fresno City College
Garvase A. Eckenrod, Business Division
Curtis E. Lackey, Technical and Industrial Division

Fresno State College
Dr. Richard Sparks, Dean of Education
Dr. Raymond H. Harrison
Dr. Lester J. Roth, Director, Experimental Teacher Education

Others
Max Tadlock, Director, Education Research, MERI
Fred J. Carvell, Specialist in Manpower and Education, MERI
Ethan P. Bernstein, General Manager, KFRE
Miscellaneous: Business men, teachers, students, citizens.
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<th>Graduates - 1967</th>
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<th>Grade Level</th>
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ILLNESS ABSENCES DURING 2ND & 3RD ATTENDANCE PERIODS, 1st SCHOOL DAY PERIOD
OCT. 9 to DEC. 1

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MAJOR CONCLUSIONS IDENTIFIED BY PROJECT STAFF

TF 24- 1. Serious problems of de-facto segregation, especially in West Fresno, need to be considered top priority.

TF 24- 2. A highly inflexible educational program and teachers inadequately prepared to cope with instructional revision hinder innovation.

TF 24- 3. There is a need for better articulation between departments and between school levels, especially in vocational education.

TF 24- 4. Detection and treatment of individual pupil deficiencies and problems should be done sooner, prior to the seventh grade.

TF 24- 5. There should be more cooperative planning studies by schools, individuals, and community agencies or organizations concentrating on specific school related problems.

TF 24- 6. Classroom teachers should have more effective part in school and district decision making.

TF 24- 7. Vocational education needs to be viewed as a method of instruction and learning rather than as preparation for a specific job.

TF 24- 8. Teacher training institutions must be told by school districts what is needed in in-service and pre-service training.

TF 24- 9. Better prepared vocational counselors are needed.

TF 24- 10. Vocational education should be a part of the program for all students, not just those identified as non-academic.

TF 24- 11. Every student can and must do something well, and the schools should aid him in identifying this ability.

TF 24- 12. Ability grouping needs study and evaluation by teachers.

TF 24- 13. Building a good self-image and a feeling-of-belonging are critical needs of students.

TF 24- 14. More and better opportunities for community or adult education needs to be viewed as an important medium for the discussion and solution of many student problems.