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ABSTRACT

Discussions with council members, a review of relevant documents, contacts with legislative personnel, and interviews with vocational personnel in the California State Department of Education were the sources of information used to determine the feasibility of a "career ladder" curriculum. It was concluded that the career preparation of all people must be developed on a broad basis, that vocational education must be introduced at the kindergarten level and carried through the community college level, and that the career ladder concept may be the most desirable curriculum to achieve these results. Recommendations are that steps be taken to implement this program and to provide funds and a plan for the training of counselors to meet the needs of this program. (GEB)

(C-1)

A Study of the Feasibility of a Statewide "Career Ladder" Transferable Curriculum from the High School Level through the Community College Level, and Statewide "Career Ladder" Guidance and Counseling from the High School Level through the Community College Level.

Short Title: Feasibility Study of Career Ladder Curriculum and Guidance and Counseling.

January, 1971

CALIFORNIA ADVISORY COUNCIL ON VOCATIONAL EDUCATION AND TECHNICAL TRAINING

1500 - 5th Street Sacramento, California
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and Technical Training
January 1971

I. Introduction

This feasibility study was undertaken by the California Advisory Council on Vocational Education and Technical Training in response to the resolutuion contained in Assembly Concurrent Resolution #128. It stated:

> "Resolved by the Assembly of the State of California, the Senate thereof concurring, that the members request that the Advisory Council on Vocational Education engage in a comprehensive in-depth study of the feasibility of (a) statewide "Career Ladder" transferable curriculum from the high school level through the Community College level and, (b) statewide "Career Ladder" guidance and counseling from the high school level through the community college level both with the aim of curbing high school dropout rates and capturing the ambitions of youth".

The study as presented was developed from examination of relevant documents, and from discussions with members of the Council. Legislative personnel who were involved in the drafting of ACR 128 and concerned with the problems of vocational education as well as guidance were also contacted. Personnel in the California State Department of Education, who are responsible for vocational education, were interviewed. The experiences of consultants were utilized so as to fully explore all possible facets of years of research and development work in education and training.

This report shows by possible courses of action that it is not only feasible but extremely important to design and implement programs in vocational education and technical training through new and essentially revolutionary approaches to "career ladder" curricula, including counseling and guidance.

II. Description of Career Ladder Curriculum Models

The following material highlights the essential points deemed desirable for implementation in the most comprehensive and functional career ladder model. An alternative model is briefly treated.

A. Premises

1. Modern technology, changing skill and knowledge requirements, and the evolving occupational markets require that modern career preparation be comprehensive, that it be generalizable, and that it provide for both vertical and horizontal career mobility. Career preparation can no longer be limited, narrow, and job-specific, and oriented toward a static job market.

2. Our public school systems (up through the community college), generally do not provide a reasonable variety of broad and flexible vocational career ladder preparations. The schools, rather than leading in the development of modern vocational curricula are trailing contemporary, occupational requirements.

3. The current unrest and discontent among young adults of school age is, in part, reflecting the disparities they find between their school activities and the world in which they are being prepared to function. They observe that programs do not always appear to match job-market needs. There seems to be a great deal of apparent irrelevance in their educational program.

4. Young adults are generally required to choose between vocational and academic goals, and thus to make career decisions too early and without sufficient knowledge of their abilities, interests, and the world of work.

5. The vocational-academic dichotomy which permeates education is artificial and outmoded. This dichotomy, coupled with the emphasis on traditional subject matter block curriculum and the normal curve concept of evaluation, make the typical school's approach to career preparation maladaptive.

6. Vocational education does not enjoy full acceptance among many educators, students, or parents. Minority groups, particularly, tend to shun what they perceive to be second class educational preparation.

7. Significant and major changes within the system of public education are required. Many of the present practices and limitations in both academic and vocational education must be eliminated if there is to be an extensive development of career ladder curriculum and counseling and guidance in the California schools.

B. Description of a Functional Model

Extensive treatment is accorded the "functional model" by this proposal. Why? ACR 128 employs the term "career ladder curriculum" but does not define it. The functional model gaining acceptance as the proper approach to career ladder preparations is identified in federal legislation, Department of Health, Education and Welfare policy, exemplary program guidance and publications in the professional literature. The current and generally accepted description of the career ladder concept in layman's terms simply means that, beginning with the kindergarten and extending through the community college the curriculum will be revised to make it fit the needs of individual students. It is intended to make the curriculum flexible and adjustable so that all students interested in earning a living with or without the benefits of a college or

university degree, can gain some actual experience and knowledge of the world of work. In all cases it is planned to equip every boy and girl with sufficient knowledge of and skill in general occupational areas so that they may obtain some form of employment after graduation from high school. Even the college-oriented and directed students will find this knowledge and skill of economic value as well as a possible educational, and vocational interest.

In view of the implications of the foregoing premises, a viable and functional career ladder curriculum should take shape along the following lines. In briefest outline, it would be an integrated and comprehensive academic-vocational curriculum providing all high school graduates with the necessary qualifications for maximum post high school flexibility. Its salient feature would be that no option would be closed to any student prior to high school graduation; i.e., community college or technical school occupational training, entry into the job market, or four-year degree study.

Such a curriculum would deemphasize the academic-vocational dichotomy and provide a general career-preparatory curriculum option available to all students. Academic-vocational distinctions would fade with the traditional academic subjects being interfused with the non-academic. The academic and non-academic subjects would be taught with direct application and relevance to each other.

Instruction should be cast in comprehensive and broad modules categorized by job function rather than by subject matter block. Instruction would come to be task related.

Figure 1 diagrams how the curriculum might be set up. This concept is an adaptation of Sidney Fine's job categorization scheme used in the Labor Department's Dictionary of Occupational Titles.

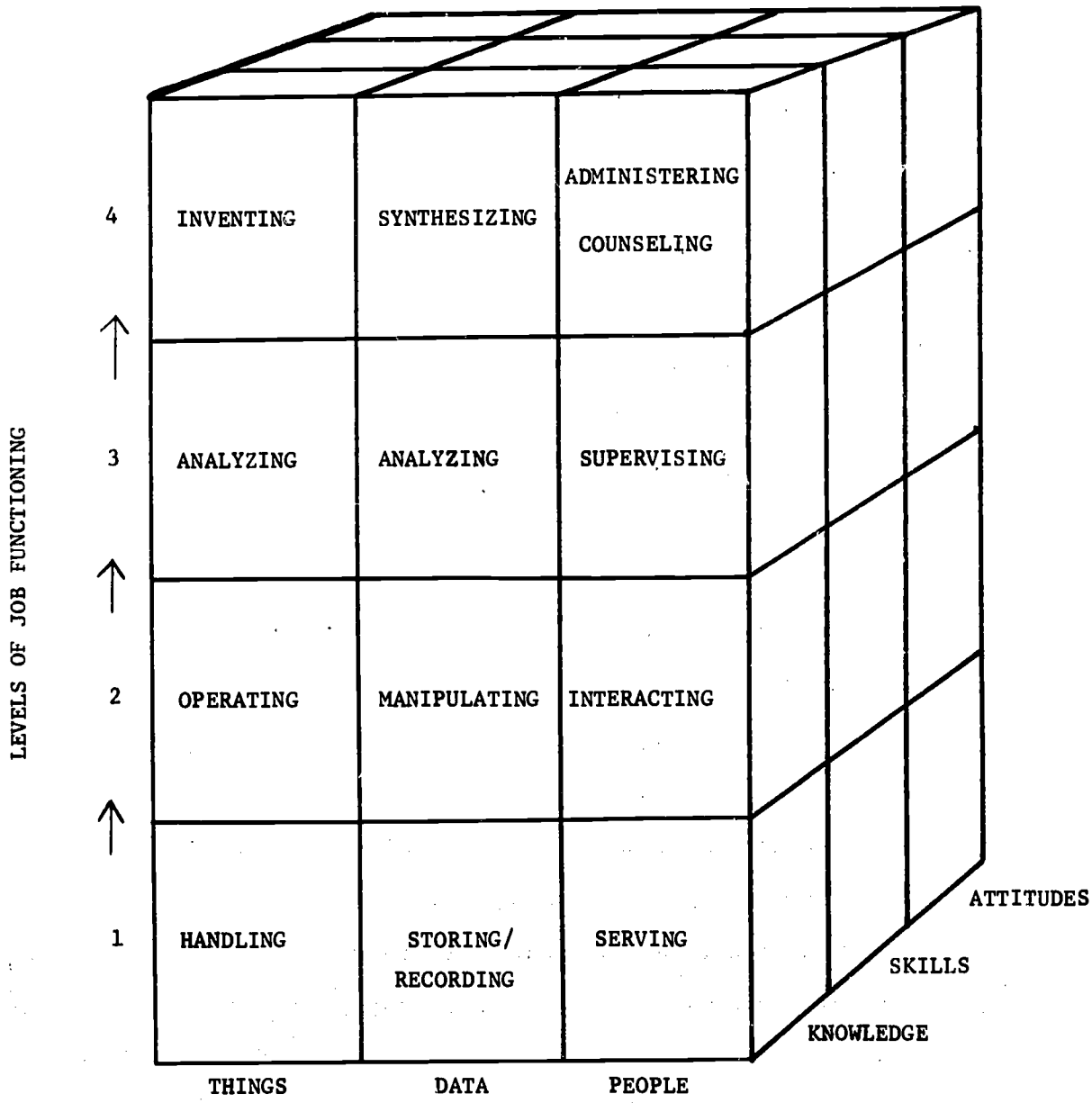

Fig. 1. THREE DIMENSIONAL REPRESENTATION OF A FUNCTIONAL CAREER LADDER CURRICULUM

The DOT classifies each job according to the levels at which a person is required to function in dealing with things, data and people. The diagram inter-relates broad job categories (things, data and people) with hierarchical levels of functioning (the number 4 is not fixed) and the "substance" of education and training (knowledge, skills and attitudes).

To illustrate the variety of content modules which could be offered in the curriculum, a number of examples (selected at random) are provided below. Each module would be designed to provide the student with the knowledge, skills and attitudes required to function at a particular level. Some modules might include one or two, or might cut across all three, of the broad job categories of things, data, and people.

Content modules could include: Measurement (linear, electrical, personnel...); test equipment and procedures (mechanical, laboratory, electrical, skill proficiency...); problem solving (engines, power supplies, hydraulic systems, communication flow...); planning and drawing (blueprints, engineering drafting, circuitry...); personnel interaction (communicating, information gathering, instructing...); data analysis (computation, calculators, programming...); shop operations (following directions, planning, evaluation...).

The curriculum would be a hierarchical and progressively developing one taking the student to higher and higher levels of job functioning as he mastered the lower. This hierarchical structure would be based upon specifiable performance objectives, the attainment of each level by a student being the criterion for progression to the next level in the structure.

The curriculum would be comprehensive in scope, drawing not only

from the range of occupations but also from the academic subjects such as physics, chemistry, math, and english as such knowledges are required. Being comprehensive and challenging, it would come to have higher and higher status.

Major development would be concentrated at the high school and community college levels, but the new concepts in the curriculum would be introduced in the kindergarten curriculum. Assembly Bill 2010, signed into law on 20 September 1970, adds vocational-technical courses to prescribed courses which shall be offered for grades 7-12. Particular attention would need to be given to orientaticn and training courses for teachers and administrators. New materials and techniques would need to be developed, tested and refined. Some action suggestions are made below:

1. Arrange the curriculum so that hard and fast career decisions are delayed until the student feels competent to make enlightened choices. The curriculum would provide for any given student's opting to pursue formal study, vocational training, a full-time occupation, or an appropriate admixture of these options, upon graduation from high school.

2. Develop flexible instructional sequences that would permit any given student to leave (or re-enter) the sequence at designated points along a time line. Dovetailing with the paragraph immediately above, instruction would be organized to provide for career ladder progressions (job clusters) to be selected by the student when he feels equipped to choose. He might elect to leave school at a point along the way and seek employment at that level; he might elect to pursue training to fit him for a higher level (or the top) occupation; he

might elect to leave and then re-enter the instructional sequence one or more times, alternately seeking work and training at progressively higher levels along the ladder.

The curriculum would be organized so as to have job-market relevance throughout its various phases. The graduate would derive the greatest benefit, of course, having completed the entire curriculum. The dropout would benefit, being able to function at the job level which he completed before leaving. The curriculum would equip even the "shortest timer" with a minimum level of preparation for functioning in some sort of job(s). Such a curriculum, offering both vertical and horizontal mobility, should have strong "pull back" power. Former students should be more likely to return for further training. Figure 2 diagrams how the curriculum might be shown along a time line.

The functional curriculum would permit the student to decide when he would become specific in his instruction. For example, a student might pursue the broadest instruction across all three job categories for two or three years, finding out in his last year that his interests and abilities lie in working with things and data. He might be graduated from high school with a firm decision to enter the laboratory technical specialty in his community college. He would then enter the world of work with a broad and general vocational education, equipped to function at high levels in many jobs, with special qualifications in laboratory techniques.

This is not meant to imply that single-job or job-cluster training would not be available for the student who is confirmed in his or her choice of a single job or job grouping. For those who

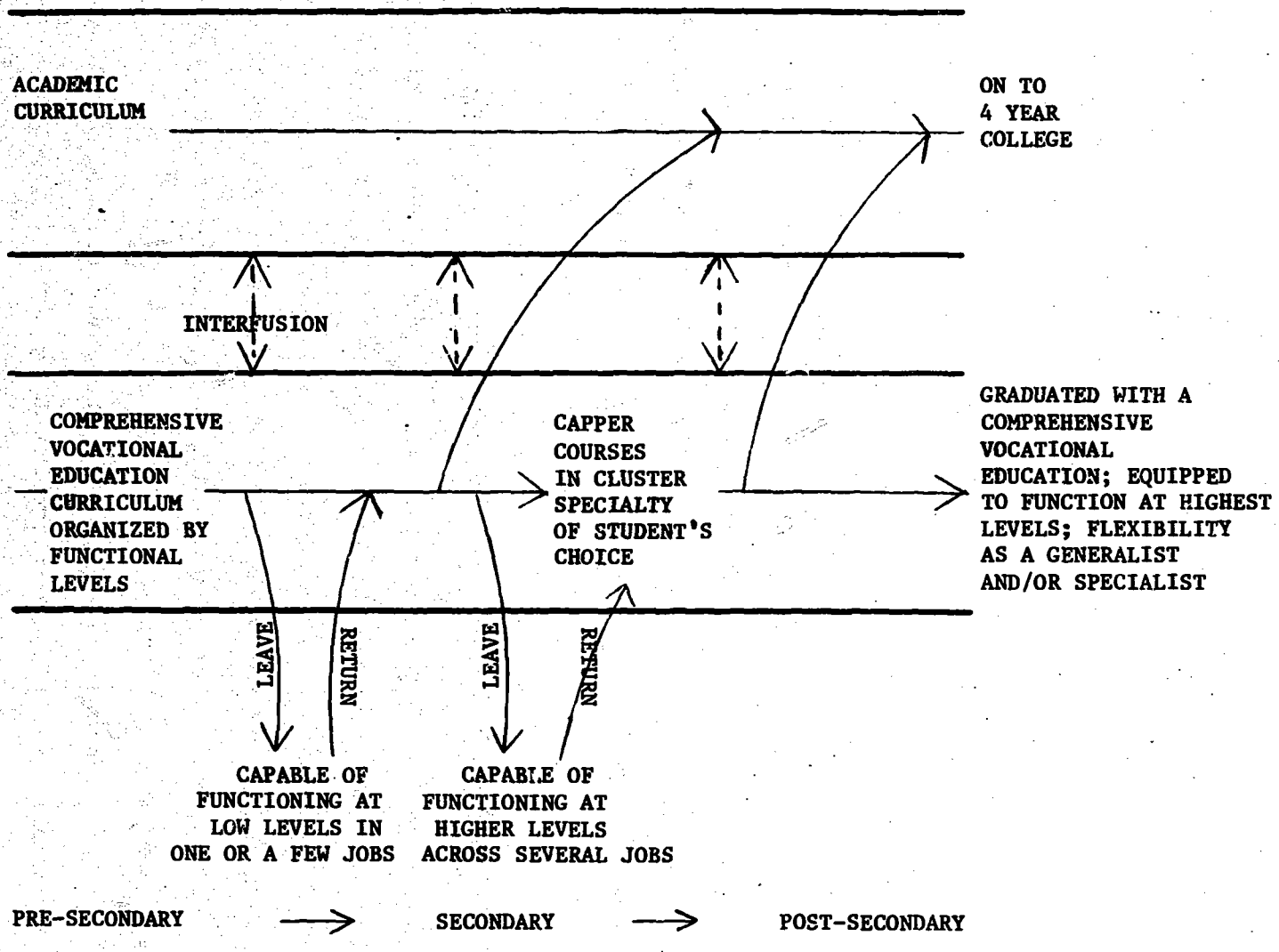

Fig. 2. How the functional vocational education curriculum might be shown along a time-line.

have made early career decisions, the option of specializing immediately should be available. Such specific training should always be available even though students would be encouraged to acquire the broadest and most flexible occupational base.

3. Break the grade-by-grade, group instructional lock-step, allowing individual students to pursue instruction to accommodate their individual learning styles.

4. Adopt mastery as the criterion for advancement within a given instructional sequence. This approach would eliminate the practice of assessing a given student's learning performance in terms of his relative position in a group distribution of grades. It would eliminate wasteful repetition of course work. Criteria for evaluation would be in terms of a given student's attainment of specific performance objectives, regardless of the performance of his classmates or what prior formal instruction he has had.

5. Provide meaningful incentives for pursuing instruction. A significant behavioral science contribution of the past decade has been the realization that the principles of operant behavior can be applied to ongoing school activities. If reinforcement (reward) is contingent upon the successful learning of specified knowledge performance objectives, regardless of the performance of his classmates or what prior formal instruction he has had, then the student will achieve.

Generally speaking, the academic curriculum always has been "functional" for the college bound in that it has broadly educated. A good academic curriculum is so comprehensive that today's academic high school graduate may enter the college of his choice (meeting

standards, of course) and pursue the major of his choice. He enjoys maximum post-high school flexibility and may delay career choice on into his third and fourth years of college.

Not so with the current vocational graduate. He is not educated for the world of work in the same broad sense. Instead, he has been trained for a job, hopefully for a cluster of several related jobs. Because current vocational education forces early career decisions; because it does not provide comprehensive vocational education so that the graduate may consider a broad choice of vocations; because his flexibility is greatly reduced vis-a-vis his academic counterpart, his preparation is not functional.

The functional curriculum model is the only one that addresses all the problem areas outlined under Premises above.

C. Description of a Cluster Model

In schools where this model is employed, curriculum has been re-organized and revised, both horizontally and vertically, to orient instruction toward meaningful multi-job, multi-level groupings or clusters. Major clusterings (and sub groups) are usually aligned with the major categories of vocational preparation (Trade and Industrial, Health, Distributive,...). This curriculum provides the student with hierarchical and progressively developing instruction preparing him for working in his choice of a cluster of related jobs, working in the highest level job to which he elects to pursue training.

This model provides an individual with considerably broader flexibility than that provided by training for a single job or trade. It provides a broader base for employability, it lessens the likelihood of "over-night" job loss because technological change has wiped out a single job, it provides a meaningful career ladder,

and it gives the individual options as to when he elects to go to work as well as the level at which he begins working.

Though it addresses some of the problem areas outlined above in Premises, this model provides job training and, although it tends toward broad vocational education, it requires early career choice, and it tends to maintain the academic-vocational dichotomy.

This model could be strengthened by providing a more comprehensive and flexible approach to vocational education. However, the basic purpose of the cluster model, as described above, should not be lost in an attempt to refine the program.

III. Career Ladder Guidance and Counseling

A. Definition:

"Career ladder concept" refers to a curriculum which has as its goal successful occupational placement. "Career ladder guidance and counseling" is defined as a developmental, vocational guidance model which provides an opportunity for all students to have sequential vocational and career development experiences through all grade levels.

B. Principles:

1. Career ladder guidance and counseling should be an integral part of the total school program. It should begin in kindergarten and extend through the community college.

2. Career ladder guidance and counseling is a continuing process for all members of our society.

3. Career ladder guidance and counseling accepts the premise that vocational preferences and competencies change with experience and provide opportunities for career exploration and vocational maturity.

4. Career ladder guidance and counseling recognizes that the development of a realistic self-concept is a major concern of education.

5. Career ladder guidance and counseling provides for experiences in the decision making process.

C. Description of a Model Counseling-Placement-Follow Up Program

The broad concepts to be implemented in a counseling program interwoven with the career ladder curriculum are seen to be as follows:

1. Overall objective. To develop and implement a prototype career counseling-placement-follow-up program geared to the requirement to today's migrating and career-mobile student. Subsidiary, enabling objectives for accomplishing the overall objective are:

a. To establish and maintain viable and continually functioning information-flow links between counselors and potential employers. (This is the key enabling objective upon which the accomplishment of all others will depend.)

b. To establish regular placement channels so that a given vocational student (before graduation) can have made specific and realistic employment arrangements.

c. To establish formal, periodic feedback procedures between school vocational counselors and employers' personnel offices.

2. Program Operation.

a. The program would be designed to be, and to remain, responsive to the fluctuating characteristics of the occupational markets in a broad geographical region.

b. The program would be designed to effect a cooperative school-employer two-way communication system that (1) keeps school vocational counselors attuned to the specifics of the locale's

changing occupational markets, and (2) keeps potential employers' offices attuned to the flow of vocational graduates.

c. The program would be designed to provide individualized and specific counseling and placement follow up service to a given vocational student, rather than generalized counseling, which often tends to be ineffective. Viable placement channels would be established so that a given vocational student (long before graduation) would have specific knowledge as to (1) what jobs are available, (2) in what areas, (3) for given levels of preparations, so that upon being graduated the student would have a high probability of being placed in a selected job of his choice. Interviews with potential employers and field trips would be priority activities.

All of the above would apply equally to all students who must for one reason or another find employment, either while in high school, upon graduation from high school or while in college or university. Therefore academic as well as vocationally oriented students would be involved.

Formal, periodic feedback procedures would be set up so that: (1) school vocational counselors would be provided information evaluating the effectiveness of specific graduates in specific jobs; (2) vocational counselors could generate general information over time on the appropriateness of their school's training/counseling programs (information to be used in retooling; redirecting programs in response to emerging occupations); (3) employers' personnel offices could have specific information on what kinds of potential

employees will be available, in what numbers, and with what levels of preparation.

The emphasis in this program would be on the establishment of liaisons and the development of procedures by and with the counselors as well as on the training and retraining of counselors.

The program would be oriented toward guiding them in developing channels, gathering job information, securing personal work experience, keeping job information current, keeping personnel offices apprised of the availability of job seekers, traveling, and maintaining frequent contacts with their students.

The counseling-placement-follow-up program outlined above is seen as being the appropriate model for use with the career ladder curriculum.

It is pertinent at this point to point out that throughout this paper the significance of the counselor's role and his responsibilities to the students have been stressed. The clear need of counselors, trained in vocational education, is mandatory if the educational plans and objectives are to be realized.

All teachers, of course, have guidance and counseling responsibilities inherent in their assignments. Few are actually trained to do the counseling. They may, however, assist the guidance and counseling staff in the areas of their speciality. Counselors must be trained in the art of vocational counseling.

Basically the real change must come in the type of assignment currently required of the guidance and counseling staff by the school administrators. The time factor is extremely limiting and their assignments must be planned so that they have the time to do their assignments as suggested in this paper.

IV. Outline of a Suggested Plan of Implementation

The Council feels that it is quite clear at this point that it is feasible to develop new program approaches to vocational education, technical training, and guidance and counseling. It is also quite clear that the "career ladder" concept offers a realistic, practical, and attainable system and viable techniques for achieving the best of hoped for educational objectives.

When the next step is taken i.e., the implementation step as is set forth in AB 1331, certain preliminary actions contained in this report could be taken. These suggested preliminary actions as listed below would greatly assist in clarifying the total approach. There are eight suggested actions to be considered.

A. Develop a Consensus Definition. This is an important step in designing a "career ladder curriculum". Continue development of the concept of curriculum revising and refining so as to arrive at a clear description of what is intended. Possibly several versions of the functional and/or job cluster models should be considered in addition to the two described here. Achieving unanimity may be difficult, but this phase is imperative if clear communication about the curriculum is to occur later. Representatives from groups and/or individual agencies as appropriate, involved with all types of education, should participate in developing the prototype(s). This phase will provide an unequivocal picture of what is meant by the term "career ladder curriculum".

B. Determine Acceptability. Test reactions to the possibility of instituting such a curriculum by submitting materials describing

the curriculum to a selected sample of respondents. Select respondents so that they represent a socioeconomic cross-section of high school and community college districts. A large sampling should be taken. Solicit reactions from selected administrators, faculty, parents, current students and vocational education alumni, and from employers. Gathering of data should be via (1) structured-questionnaire, and (2) open-ended queries sent by mail.

As a double check on the data gathered by mail, a smaller sample of the same respondents could also be interviewed personally. This is time consuming and expensive, but valuable.

This phase will assess the all-important climate of attitude toward the concept, and will indicate the extent to which vocational education participants at all levels perceive the need for such. It will provide early information on where major resistance will be found.

C. Determine Administrative/Legal Problems. Review current legal and administrative provisions for school operation in order to determine what changes would be required to pool resources, and to conduct reciprocal activities in order to implement the concept. This information is needed in order to undertake planning to determine the optimum relationship among the high schools and community colleges of a given district, e.g., determine respective roles of the community college and high school, how high schools should interact among themselves, whether particular parts of a program should be offered in the high schools or the community college, etc.

This phase will also reveal the magnitude of the problem posed by the independence of school districts with their separate financial structures. This phase should produce a clear picture of the

additional legislation which may be required to implement the career ladder concept statewide.

D. Survey Facilities. In order to determine the extent to which high school and community college district facilities will permit the implementation of career ladder progressions, a representative group of high school/community college districts should be examined. This phase would look for the effects of geographical distance, the impact of the existence of (or lack of) buildings and instructional equipment in a district, the extent to which facilities and equipment could be pooled, the probability that particular high school/community college districts would be able to offer a variety of career ladder options or would be required, by limited physical plant, to restrict their offerings to certain specialities.

E. Determine Occupational Trends. This phase would be devoted to gathering information on anticipated manpower needs so that curriculum modifications could be made in consonance with current and predicted job market trends. At the most general level this phase would determine what the current career fields are and which ones are emerging. It would chart the course of the changing occupational profile. This work would be largely statistical. U. S. Department of Labor and California Department of Human Resources Development publications would be perused for data on National and State level population trends, work force trends, and patterns of industrial growth and decline in each occupational category.

The periodically published California regional manpower surveys would be similarly examined for corresponding data at local levels.

This phase should be conducted in close cooperation with personnel of the Department of Human Resources Development.

F. Examine Programs. This phase would consist of an analysis of currently offered programs (high school, community college, technical school) to determine the extent to which curriculum overhaul would be required to begin transitioning to the career ladder concept. What gaps exist, what new courses are required, which current offerings would be obsolete? In effect, this phase would provide information on what changes in the status quo would be required, recognition of the stumbling blocks provided by current licensure and mandatory-hour provisions, and would estimate the magnitude of the upheaval to be involved. Unless there are already big gaps in content, transitioning content to the career ladder concept should be largely a matter of reorganizing.

G. Study Operational Models. This phase would seek out existing career ladder curricula (or approximations of the concept) both in and outside the state. There are some, for example, San Mateo and North Orange Junior College. The experiences of those who set them up and who are operating them would provide information of obvious value. This phase could be conducted as a series of field visits. Attention would be devoted mainly to curriculum organization, student flow, and placement of graduates.

H. Decide How to Undertake Implementation. With the information obtained in the preceding seven steps, it would now be possible to decide whether or not to undertake pilot implementation. Such pilot implementation could probably be handled best on a regional basis involving, say, two to three community college districts, and the network of feeder elementary, junior and senior high schools which, hopefully would be heterogeneous as to population density, ethnic makeup, socioeconomic level, career aspirations and mobility of the student population, industrial variety and density,

physical plant (college and High school) and geography.

This would be the time to select the career ladder progressions to be piloted and the districts with which to work, and to also rough out time schedules and phase lines for content development, staff orientation, and recruiting and enrolling of students.

V. Summary and Recommendations

It is quite clear that modern technology, with its constantly changing job requirements, demands a new, viable approach to all education design and planning. Career preparation for all people must be developed on broader, somewhat less specific and discrete bases than heretofore.

Vocational education must be envisioned as a permanent, integral, inseparable part of all education. Philosophies, concepts, policies, and practices of vocational education must be introduced in appropriate fashion at the kindergarten level and carried on through the community college level.

The "Career Ladder" curriculum concept indicates a very possible and realistic, organized approach to achieving the most beneficial educational results. Each student, according to his or her needs, interests and abilities, will have the opportunity and privilege of reaching maximum potential achievement. This approach will be of great significance to disadvantaged groups.

The importance of adequate and qualified vocational guidance and counseling has been stressed. The Council strongly recommends that the State Board of Education take the necessary steps to provide funds, and a plan for training of counselors, so as to meet the needs

of this program.

The California Advisory Council on Vocational Education and Technical Training indicates in this report that it is entirely feasible to develop, manage, and effectively utilize a career ladder transferable curriculum, and guidance and counseling. The Council strongly recommends that steps be taken to immediately implement the suggestions in this report. The Council also reaffirms its support of AB 1331 which sets out in detail a plan of implementation which would carry out the philosophies and intent embodied in this report.