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**AUTHOR** West, John R.  
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**ABSTRACT**

This study of Santa Ana College students was designed to assess the success of the district's vocational curricula in meeting student needs for job-related skills by ascertaining the relevancy of student coursework to current student employment. One hundred and eighty (30 percent) of the 599 students enrolled, or recently enrolled, in certain advanced evening courses in the Business and Technical Arts curricula in the spring of 1974 responded to a survey questionnaire. Results indicated a wide variation in the degree of relevance between course work and current employment. Of the 15 surveying students responding, 14 were currently employed; all 14 indicated that their course work was job-related. At the other extreme, six of the nine respondents in Tax Accounting said that their current jobs were not at all related to their course work. Seventy-six percent of the employed respondents felt that their jobs were related to their vocational education courses. Respondents' marital status, sex, dependent-independent status, educational attainment, and current involvement in school or employment are also noted. The questionnaire and tabulated results are appended.  
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AN ANALYSIS OF THE RELATIONSHIP BETWEEN VOCATIONAL  
CURRICULA AND STUDENTS' OCCUPATIONAL  
GOALS

By

John R. West, M.A.  
Santa Ana College

A PRACTICUM PRESENTED TO NOVA UNIVERSITY IN PARTIAL  
FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF DOCTOR OF EDUCATION

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## BACKGROUND AND SIGNIFICANCE

Inherent in any educational system should exist the means to evaluate and assess the extent to which the system has succeeded in doing what it set out to do. Inherent in the mood of contemporary U.S.A. is the demand for ongoing assessment of programs funded by public monies. Marvin C.

Alkin has said:

Accountability is a negotiated relationship in which the participants agree in advance to accept specified rewards and costs on the basis of evaluation findings as to the attainment of specified ends. (Alkin, 1970)

He further states:

The essence of this definition is that a negotiated relationship exists in which each of the participants agree in advance as to the criteria (evaluation findings) that will be used to determine acceptability. Furthermore, the level of attainment on these criteria in order to achieve acceptability is pre-specified. Finally, the negotiants stipulate a set of rewards and penalties, that will attach to compliance/noncompliance. (Alkin, 1970)

The rewards for compliance are fairly obvious. The penalties for non-compliance, though perhaps less tangible, are far more numerous, primary of which is withdrawal of funds to sustain errant programs.

Santa Ana College, like many other community colleges, for its first fifty years looked upon itself as a "mini-university," dedicated exclusively to academic pursuits with little regard for the demands of the local "world of work". Even after World War II, when many community colleges were reacting positively to social pressures to serve the needs of returning servicemen, Santa Ana College, because of ideological reasons, was somewhat reluctant to move in the direction of practical, or vocational education.

David S. Bushnell, in his Organizing for Change, observed:

The ability of the community junior college to accommodate a diverse set of student needs and a wide range of age groups has not yet been well demonstrated on a nationwide basis. Curriculum content and instructional procedures are clearly oriented to the more able and above-average students. While there is a growing interest in experimental compensatory education programs, few have been carefully evaluated to determine whether they offer a meaningful alternative to current programs. Little provision is being made for differentiating between the verbally skilled and the nonverbally oriented student, between the career-oriented and the undecided student, or between the part-time student with extensive work experience and the student with little or no experience at all. (Bushnell, 1973).

For the past decade Santa Ana College has involved itself more and more in the business of vocational education. This practicum seeks to determine how well its objectives have been met.

Preparatory Vocational Education should provide training for the needs for the vast numbers of people who enter the semiskilled operating, assembling, and service jobs in industry, transportation, and communication, as well as for those jobs classified as "Skilled Trades." There is no good reason other than tradition why persons headed for the semiskilled industrial occupations should not have a program of training to fit their needs. By far the greater number of industrial jobs are in this category, particularly beginning jobs for young people. The courses need not be long. A few months, perhaps a half year, is ample training for many semiskilled jobs. If there is more time, let persons be trained for several closely related semiskilled jobs.

Some phases of the complete program of Preparatory Vocational Education can be best taught in schools, some phases on the job. It is well for Vocational educators to recognize that the school and wage-earning-employment together are usually needed to complement each other in the complete

Vocational preparation of persons for trades and industries. A school can do much in developing understandings of the problems of organized labor, management, public interests in industrial matters, and understandings of regulatory conditions now imposed in considerable number by federal and state legislation and policies. It surely can begin to develop appreciations of good work attitudes and work habits. But after all of this, a complete industrial education still requires the experience of wage-earning-employment to secure an understanding of the extent of the relationship between training and application, speed, continuity of work or repetitive acts, and industrial "atmosphere". Neither educators or employers should allow themselves to be misled in these matters. Thus the rationale for the close relationship between Santa Ana College's vocational education staff and representatives of the local labor market.

Related technical instruction should be truly related, and it should be based upon an analysis of what competent workers in a given occupation are required to know. Far too much of our "related subjects" in Preparatory Vocational Education has been merely academic science and mathematics colored with a bit of vocational flavoring in order to secure federal and state reimbursements. The "drawing" has often been technical drawing instead of plan reading and sketching. Many teachers have been incompetent, have lacked trade experience in even one occupation. We have not been willing to pay the price of segregating groups of trainees either by trades or by accomplishment levels. On the whole, related subjects has been the weak link in Preparatory Vocational Education. Yet it grows daily in importance. Subject matter should be based on an analysis of real trade needs. Foundational review courses of former mathematics and some science may be necessary as a prerequisite to real related

subjects instruction. Better class organization is necessary. Various trades do not require the same kind and amount of related-subjects instruction. A very important part of our vocational instruction is functioning only moderately well. Mager says:

Learning is for the future; that is, the object of instruction is to facilitate some form of behavior at a point after the instruction has been completed. (Mager, 1968).

## Enrollee Selection

Enrollees in Preparatory Vocational Education should be carefully selected or should be permitted to enroll only through the operation of an adequate program of vocational guidance. Vocational education has been rapidly losing its questionable designation of a "dumping ground" for misfits in our colleges. In an increasing number of districts, students must often be placed in waiting lists. This is because students are being more realistic in their attitudes toward "blue-collar" jobs. In many districts, facilities are inadequate to care for the skilled trades. Through an efficient guidance program, those whose mentality, aptitudes, and interests indicate success in the skilled-trades level could be directed toward them. Others with various qualifications which indicate aptitude for the many routinized, semiskilled industrial jobs could be guided appropriately. Brief intensive training for the latter group just previous to leaving school should be provided.

Studies reveal that there are several widely used procedures or instruments employed in selecting enrollees for vocational courses. The judgements of instructors, mechanical aptitude tests, vocational inventories, and intelligence tests are common. Guidance counselors, however, should keep in mind that the correlation between general intelligence, as measured, and ability to achieve in mechanical work, while positive, is very low. Many vocational teachers assert that the best criterion for students selection is the recommendation of the industrial arts teacher.

A local program of Preparatory Vocational Education should be based just as much upon a survey of what jobs the student drop-outs and

recommendation of the industrial arts teacher.

A local program of Preparatory Vocational Education should be based just as much upon a survey of what jobs the student drop-outs and graduates enter in their first or early jobs, as upon a survey of local industries and industrial opportunities. Every district would like to have its students find employment in the home town. Many surveys of the last quarter century show that this is an idle dream and wishful thinking. The actual figures of worked migration in all occupations are startling. Probably not more than 25 cities in the United States are large enough and have sufficiently diversified occupations represented in them to justify basing the local programs of preparatory vocational industrial education solely upon a survey of the job opportunities of that school district.

One alternative is to discover the first or early industrial jobs that many students actually enter upon leaving school. These are varied, usually semiskilled and service type jobs. Frequently many have little local prominence. Students enter them because the jobs available, or because of special interests, aptitudes, or developed skill or knowledge. Each student and his several particular qualifications, and the jobs that students can actually find employment in, are just as important criteria for determining a local program of vocational education as number or payroll jobs in the community. No one even questions whether students in college preparatory curriculums, bound largely for the professions, will ultimately work in their home community. In the final analysis, students today are entitled to both general and special education simply because he is an American student of wage-earning, tax-paying capabilities, not because certain payroll jobs happen to exist in numbers in his particular community. According to the

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Committee for the White House Conference, the mandate is clear:

The order given by the American people to the schools is grand in its simplicity: in addition to intellectual achievement, to foster morality, happiness, and any useful ability. The talent of each child is to be sought out and developed to the fullest. Each weakness is to be studied and so far as possible, corrected. (Committee for the White House Conference, 1959, pg. 9)

## SOCIOLOGICAL IMPLICATIONS

The changes that take place in industry and occupations under increasing industrialism are widely known and can be quickly reviewed. To sense the character of the times it is useful to recall that throughout the history of man, until the last 50 to 75 years, most human labor in a society was devoted to the gathering and raising of food. We start with agriculture as the primary industry when tracing modern changes in the nature of work. In the agricultural stage work is relatively unskilled, and for the most part is closely identified with the home. As industrialization gets underway in a society, some men move into manufacturing - the turning of resources into products through technical processes. At this early stage of industrialism, work is still manual for the most part and at first there is little rise in skill. The worker has simply taken his hands from the farm to the factory, or from the plow in the field to a room inside his house to work on materials put out to him by an entrepreneur. But as industrialization advances, work changes radically: jobs are separated from the home and grouped in large organizations. Those who continue to work with their hands must acquire skills of increasing complexity and requisite training and there emerges semiskilled and skilled blue-collar occupations; an increasing proportion of the work becomes mental labor and there emerges a white-collar office force in the factory. Then, as an economy becomes modern, moving into a stage of advanced industrialism, the emphasis shifts from manufacturing toward service or tertiary industry, toward the distribution of products and various forms of services and economic facilitation: transportation, finance, insurance, wholesale and retail trade, government, professional work, domestic labor. Within this large and varied sector work is predominantly mental.

With industrialization, with this shift from agriculture to manufacturing to

service industry, society is characterized by an ever growing division of labor. In a pre-literate society, labor may be divided only between sex and age; work for women and work for men, work for the younger male and work for the older man. In a society of early industrialization, characterized by modest complexity, different occupations may number in the several hundred. Great Britain had approximately 430 occupational titles in 1841. In a society of advanced industrialism, the different kinds of jobs number into the thousands; over 25,000 in the United States in 1940, (Caplow, 1954). In sum: labor is ever more divided; it shifts constantly from manual to mental, from hand to head work; and there are rising levels of skill required in both the manual and the mental labor.

These basic changes in industry and work are reflected in wholesale changes in the labor force. The proportion of all workers in the United States in agriculture dropped during the nineteenth century from nearly 75 percent in 1820 to about 50 percent in 1880 and about 37 percent in 1900. Farm workers have continued to decline and now form less than 10 percent of the work force; manual and service workers constituted about 45 percent of all workers in 1900, rose slightly to a peak of approximately 52 percent in 1940 and 1950, and now are proportionately in decline. The white-collar category is the greatest gainer, increasing steadily from 18 percent of the work force in 1900, to 42 percent in 1959. These percentages contain very large shifts in numbers, since the labor force grew from 29 million in 1900 to 65 million, in 1959; farm workers decreased in number from 11 to 6 million, and were in 1959, 59 percent of what they were in 1900; manual and service workers increased from 13 to 31 million, an increase of 238 percent; white-collar men and women increased from 5 to 27 million, or 540 percent. Since 1940, a twenty-year period, farm

workers have decreased 3 million, or by 29 percent; manual workers have increased 4 million, or by 16 percent; and white-collar workers have increased by 11 million, or by 69 percent, (Caplow, 1954).

And so it can be easily seen the nature of the task ahead for Santa Ana College, as well as other community colleges, as regards the significant audience represented by blue-collar workers. The following chart graphically describes Machlup's point.

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LABOR FORCE, 1900-1959  
(in percent)

| OCCUPATIONAL CATEGORY | 1900  | 1910  | 1920  | 1930  | 1940  | 1950  | 1959  |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|
| Farm                  | 37.5  | 30.9  | 27.0  | 21.2  | 17.4  | 11.8  | 9.9   |
| Manual and Service    | 44.9  | 47.7  | 48.1  | 49.4  | 51.5  | 51.6  | 48.0  |
| White-collar          | 17.6  | 21.3  | 24.9  | 29.4  | 31.3  | 36.6  | 42.1  |
| TOTAL                 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Fritz Machlup, The Production and Distribution of Knowledge In The United States. Princeton: Princeton University Press, 1962, p.382.

Hilda Taba says:

Educational outcomes can be, and have been, stated on several different levels. One level is that of the broad aims of education. Statements that education should transmit culture, reconstruct society, or provide for the fullest development of the individual, stake out the broad aims. A similar function is served by the statements of such aims as the development of a democratic way of life, of civic responsibility, creativity, economic self-sufficiency, or self-actualization. This latter group of statements refers to life activities of individuals in society, and expresses the dynamic center of educational activity. To the extent that educational objectives are related to the universal wants or needs of men, as created by the activities of life, education becomes more functional and dynamic. (Taba, 1962).

Evidence shows that Santa Ana College seeks to be involved in that dynamism. The problem seems to be one of methodology. Those who are concerned with the business of curriculum development should employ an ongoing process to assess need.

## Why Needs Assessment?

Needs are defined as gaps between current outcomes and achievements and desired (or required) outcomes and achievements for learners, implementers and the community. Needs assessment is a formal process which determines all gaps and places them in order of priority. (Kaufman, 1972). While the process of needs assessment has been given much attention prior to this study, the actual implementation of needs assessment at the Rancho Santiago Community College district has not been attempted.

Formal needs assessment provides governing boards and educational agencies with a valid, objective process for determining priorities for occupational education. In addition, periodic reapplication of the formal assessment process provides public accountability by documenting the degree of gap (need) closure accomplished by actions initiated as a result of needs assessment. Thus, a needs assessment system proven in the field, would insure the possibility of providing a realistic approach to education for students on a continuing basis. Educators would know what industries seek in their potential employees, what skills are considered most important, and what the employment demand is for the various occupational education graduates.

The community college may be viewed as a business. That is, it has a labor force (instructors, counselors, administrators, etc.) and it turns out a product (its graduates and trainees). However, the community college is unique as a business in that it does not exist simply to produce profit nor does its existence depend upon consumers who are willing to buy its products. Therefore, when removed from the accountability factor inherent in profit and loss, an alternative must be found. That alternative is provided by needs assessment, (Sweigert, 1971, p. 97).

Although much information may be generated regarding public image, employee competency, etc., this formal needs assessment model is seeking only answers to very basic questions, specifically: What is the current status of the community college district's occupational educational program in relation to current community needs? What courses do people want to take in comparison to what the college districts offer? What skills are learned or provided compared to the skills employers are seeking? How many jobs are available compared to the number of people being graduated? In essence, what is as compared to what should be.

Because of its growth and population shift from a predominantly middle income white to a lower middle white community rapidly increasing Spanish speaking families and other minorities, and because the attraction of several industries, the Rancho Santiago Community College District is faced with the urgent problem of evaluating its current occupational education program offerings in order to determine if the needs of this changing population are being met. Since only one-third of the total operating budget is allocated for occupational education programs and the demand for evidence of results, it becomes necessary that a systematic method of determining needs and priorities be developed to assist the college district's administration, Board of Trustees and staff to make cost effective decisions relative to introducing, expanding, maintaining, reducing, upgrading and deletion of occupational education programs where appropriate.

Industry and business have for many years utilized the concept of systematic planning to determine future needs in an effort to be more productive and effective in achieving their goals. Although community colleges in no way wish to depersonalize their activities in establishing priority needs

because they work with people not things, it is evident that little has been done to systematize their efforts. In working with people regarding vocational education, business/industry trends have to be taken into consideration so that future program development will be done in a parsimonious and efficacious manner, (Sheparovych, 1973). Duplication of costly vocational education programs that are quickly outmoded due to technological changes is an example of poor or inaccurate planning. With the best of intentions in meeting the needs of the community, but with lack of sufficient knowledge on the future trends and the existence of similar programs in a nearby radius, waste of monies by districts and waste of energies and time by students takes place.

The problem of the widespread unemployment and underemployment of youth, particularly in the 17-26 year old age group, has attracted national attention. The number one problem facing educators today 's the need for graduating students from public schools with salable skills.

In order to meet this need, new monies have been allocated to broaden the scope of occupational education to include pre-vocational experience, and innovative measures to broaden the occupational aspirations of youth and give them information from which meaningful occupational choice can be made. (Allen, 1968).

The question needs to be asked, "Are the community colleges doing everything possible to insure that students make a wise choice of a first vocation and to help them attain the minimum skills required to attain an entry level job at the point of exit from school?". Conversely, if students are so prepared, are there any factors within the economy itself which would prevent employment?

This investigation is not primarily concerned with the career choice or training of those students who plan to receive a baccalaureate degree. About 20% of young people graduate from college, a figure which matches well the approximately 20% of those professional and managerial jobs available in the economy which require a college degree. The investigation is more concerned with those who attain a high school diploma or less, and who may or may not subsequently enroll in a vocational-technical curriculum at the college district.

The unemployment rate among the 17-26 year old age group in Orange County, as throughout the nation, is disturbingly above the overall unemployment rate, which at the time of this writing, was about 6%. In addition to widespread unemployment among young people, there is the problem of inability to hold a job once one has been hired, underemployment, inability to move into higher level jobs, constant job shifts, not only among the less well educated, but even among college graduates going into well paying positions in business and industry, and job dissatisfaction. There is considerable evidence that the schools which are offering specific skill training are concentrating on narrowly specialized jobs and not preparing for changing technology and manpower needs. (Flaim, 1968).

Another aspect of the problem is that large numbers of young people have no firm goal in life, but tend to drift into school programs, jobs, marriage, and other vital decisions. This is true for highly intelligent students who go to four year colleges as well as high school dropouts. A study (Katz, 1967) of over 4,000 students at Stanford University and the University of California, Berkeley, disclosed that a large number had never really made an active decision in their lives. Like their less

market. In fact, the term, "full employment" has come to mean a state where no more than four percent of the population of the labor market are out of jobs. One of the major, if often unrecognized, reasons for societies attempt to prolong formal schooling for youth as long as possible is that the economy could not possibly absorb all of those who would like to leave school and go to work.

In recognition of these factors, educators, business men, and governmental agencies have been trying to upgrade occupational preparation with increased expenditure, new training programs, and better methods of guidance. However, the lack of reliable data on manpower requirements continues to plague those at the community college whose responsibility is to plan vocational education programs which will satisfy manpower needs. Still absent are state, regional, and local data or numbers of persons needed in specific occupations both on short and long term basis. As long as these needs and supplies remain unidentified, the potential of vocational education will remain unexploited. A needs assessment as a management information system needs to be developed, implemented, and validated.

## PROCEDURES

The attached questionnaire (see Attachment I, Appendix) was distributed to 599 students enrolled, or recently enrolled, in certain advanced courses in Business and Technical Arts. This figure represents the total enrollment of students in the vocational education program. According to Henry E. Klugh, when members of a population are not available for the investigation, the research worker studies the phenomena in a sample drawn from the population. (Klugh, 1970). The total population was used here because the total group was easily accessible. The procedure was designed to determine the extent to which the students' jobs were related to their coursework at Santa Ana College, and the degree of variation of job-curricular relationship from job-type to job-type.

A breakdown of the nature of responses is shown by marital status, gender, dependent-independent students, educational attainment, and current involvement (school or employment). (See Table II, Appendix).

## RESULTS

This study of Santa Ana College students was motivated by the desire to evaluate the district's vocational curricula. It was designed to determine whether or not the goals of vocational education courses were being met.

The population in this study consisted of students enrolled in certain evening courses of Business and Technical curricula in the spring of 1974. A total of 599 questionnaires were distributed to those students and there were 180 respondents. An analysis of the responses by subject area is given in Table I.

This response compares favorably with a recent Orange Coast College Project Follow-Through response rate of 21%, and our own experience with other surveys. There is, however, a wide variation in the response rates for individual subject areas. For example, 15 out of the 36 students who were enrolled in Advanced Surveying answered the questionnaire. On the other hand, only 2 of the 21 enrolled in the Diesel Engines course replied.

The summary of data on the 180 respondents (Table II) shows that more than half were married and that women were slightly more inclined to answer the questionnaire than were men. Most of the group was currently employed and had not attended any other school after leaving Santa Ana College. About 76% of those working indicated that their jobs were related to their course work at Santa Ana College.

As in the degree of response to the questionnaire, there was a wide variation in the degree of relevance between course work and current employment as shown by Table III. Of the 15 Surveying students who

responded, there were 14 currently employed. All 14 indicated that their course work was job-related. At the other extreme 6 of 9 respondents who had been enrolled in Tax Accounting said that their current jobs were not related at all to their course work.

Table IV shows the grades earned in the courses by the students in each group. As might be expected, the group which did not answer the questionnaire had a higher percentage of students who did not earn credit. There was also a higher rate of response among "A" students. However, no significant difference was apparent for students earning "B", "C", or "D" grades. Since there were more than 370 students in the study who earned those grades, it is felt that the characteristics of the responding group are representative of the total population.

This assumption would lead to such reasoning as:

- (1) 79 of 180 respondents said that their college course work was very much related to their current job.
- (2) 47 of the 79 are typical of the total population. (60%)
- (3) Therefore 156 of the 599 vocational students probably feel that their course work is very much related to their current job. (The ratio of 47 to 180 is approximately equal to the ratio of 156 to 599.)

Table V gives the probable distribution of course relevance responses for the various vocational areas using the survey data as a 60% reliable sample.

The findings are generally in concurrence with the expectations listed in the project proposal. The 76% representing those students who are now working and feel that their jobs are related to vocational education courses taken at SAC is significant and is regarded as effective by the program administrator.

## RECOMMENDATIONS

1. Extensive use of community advisory groups to obtain maximum community feeling. Obviously, if the community does not relate to course offerings, the program is doomed to failure.
2. Screening of potential vocation education enrollees, by use of competent guidance counselors to determine the feasibility of the student's participation in the program, and by use of instructor recommendation.
3. Establish good rapport between the vocational education staff and community employers. Conduct in-service training to ensure optimum familiarity with job availability on the part of the staff. The use of consultants is encouraged.
4. Request an explicit commitment to the Vocational Education Program from the Chief Administrative Officer of the college, on the theory that commitment tends to trickle down from the top.
5. Development of a follow-up system to determine the first or early industrial jobs that students enter upon leaving school. Where feasible, this may be accomplished by use of exit interviews.
6. To provide for an educational program to inform the community of the feasibility of specific curriculum development. The purpose being to have advisory and other community organizations set realistic goals in terms of local occupational needs.

**APPENDIX**

TABLE I

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| Vocational Subject      | Sent |    | Replied |    | % Replied |      | No Fwd Addr |   | % No Fwd |      | Total Sent | Total Replied | Total % |
|-------------------------|------|----|---------|----|-----------|------|-------------|---|----------|------|------------|---------------|---------|
|                         | M    | F  | M       | F  | M         | F    | M           | F | M        | F    |            |               |         |
| Airline Stewardess      | 0    | 56 | 0       | 24 | 0         | 42.9 | 0           | 0 | 0        | 0    | 56         | 24            | 42.9    |
| Auto 54 Applied Sci.    | 40   | 0  | 11      | 0  | 27.5      | 0    | 0           | 0 | 0        | 0    | 40         | 11            | 27.5    |
| Auto 55 Chassis         | 16   | 0  | 4       | 0  | 25.0      | 0    | 0           | 0 | 0        | 0    | 16         | 4             | 25.0    |
| Bus 2 Tax Acctg.        | 11   | 16 | 3       | 7  | 27.3      | 43.8 | 1           | 0 | 9.1      | 0    | 27         | 10            | 37.0    |
| Bus.22 Communication    | 18   | 9  | 2       | 7  | 11.1      | 77.8 | 0           | 0 | 0        | 0    | 27         | 9             | 33.3    |
| Bus 35 Cobol Progr.     | 30   | 21 | 5       | 7  | 17.7      | 33.3 | 2           | 3 | 6.7      | 14.3 | 51         | 12            | 23.5    |
| Bus 50 Mdse Sem. WS     | 30   | 10 | 5       | 4  | 16.7      | 40.0 | 0           | 0 | 0        | 0    | 40         | 9             | 22.5    |
| Bus 77 Advcd. Type.     | 1    | 33 | 0       | 13 | 0         | 39.3 | 0           | 0 | 0        | 0    | 34         | 13            | 38.2    |
| Bus 82 Office Proc      | 3    | 18 | 1       | 5  | 33.3      | 27.8 | 0           | 0 | 0        | 0    | 21         | 6             | 28.6    |
| Bus 86 Business Math    | 11   | 29 | 6       | 9  | 54.5      | 31.0 | 0           | 1 | 0        | 9.1  | 40         | 14            | 37.5    |
| Bus 87 Introd to Bus.   | 16   | 18 | 5       | 5  | 31.3      | 27.7 | 0           | 0 | 0        | 0    | 34         | 10            | 29.4    |
| Bus 96 Real Est. Appr.  | 10   | 4  | 4       | 2  | 40.0      | 50.0 | 0           | 0 | 0        | 0    | 14         | 5             | 42.8    |
| Bus 99 Real Est. Exchge | 24   | 9  | 4       | 2  | 16.7      | 22.2 | 1           | 0 | 4.2      | 0    | 33         | 6             | 18.2    |
| Computer Science 28     | 9    | 1  | 5       | 0  | 55.6      | 0    | 0           | 0 | 0        | 0    | 10         | 5             | 50.0    |
| Diesel Engine O.H.      | 21   | 0  | 2       | 0  | 9.5       | 0    | 0           | 0 | 0        | 0    | 21         | 2             | 9.5     |
| Elect. 68B Advcd Engr.  | 8    | 0  | 3       | 0  | 37.5      | 0    | 0           | 0 | 0        | 0    | 8          | 3             | 37.5    |
| Engr 2A Advcd Survey    | 36   | 0  | 15      | 0  | 41.7      | 0    | 0           | 0 | 0        | 0    | 36         | 15            | 41.7    |
| Engr 9A Mech Shop       | 15   | 0  | 4       | 0  | 26.7      | 0    | 0           | 0 | 0        | 0    | 15         | 4             | 26.7    |
| Engr 12-22-24 Tool DWG  | 18   | 0  | 4       | 0  | 22.2      | 0    | 0           | 0 | 0        | 0    | 18         | 4             | 22.2    |
| Engr 15 Architec DWG    | 24   | 0  | 5       | 0  | 20.8      | 0    | 1           | 0 | 4.2      | 0    | 24         | 5             | 20.8    |

| Vocational Subject      | Sent       |            | Repl'd    |           | % Replied   |             | No Fwd Addr |          | % No Fwd   |            | Total Sent | Total Replied | Total %     |
|-------------------------|------------|------------|-----------|-----------|-------------|-------------|-------------|----------|------------|------------|------------|---------------|-------------|
|                         | M          | F          | M         | F         | M           | F           | M           | F        | M          | F          |            |               |             |
| Engr 80 Engr Drafting   | 15         | 0          | 3         | 0         | 20.0        | 0           | 0           | 0        | 0          | 0          | 15         | 3             | 20.0        |
| Mach Shop 71B Advcd Lec | 8          | 0          | 2         | 0         | 25.0        | 0           | 0           | 0        | 0          | 0          | 8          | 2             | 25.0        |
| Welding 75B Elec. Arc   | 11         | 0          | 2         | 0         | 18.2        | 0           | 0           | 0        | 0          | 0          | 11         | 2             | 18.2        |
| <b>Totals</b>           | <b>375</b> | <b>224</b> | <b>95</b> | <b>85</b> | <b>20.2</b> | <b>24.2</b> | <b>5</b>    | <b>4</b> | <b>1.3</b> | <b>1.8</b> | <b>599</b> | <b>180</b>    | <b>30.1</b> |

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TABLE II

## VOCATIONAL STUDENT FOLLOW-UP STUDY

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|     |                                   | Male | Female | Totals |
|-----|-----------------------------------|------|--------|--------|
| 1.  | Number of Questionnaires mailed   | 375  | 224    | 599    |
| 2.  | Number of Questionnaires answered | 95   | 85     | 180    |
| 3.  | Marital Status -                  |      |        |        |
|     | Single                            | 34   | 37     | 71     |
|     | Married                           | 56   | 42     | 98     |
|     | Widowed                           | 1    | 0      | 1      |
|     | Separated                         | 0    | 1      | 1      |
|     | Divorced                          | 2    | 5      | 7      |
|     | No response                       | 2    | 0      | 2      |
| 4.  | Living at home with parents -     |      |        |        |
|     | Yes                               | 24   | 26     | 50     |
|     | No                                | 64   | 52     | 116    |
|     | No response                       | 7    | 7      | 14     |
| 5.  | Attend school after SAC -         |      |        |        |
|     | Yes                               | 32   | 20     | 52     |
|     | No                                | 63   | 65     | 128    |
| 6.  | Attending school now -            |      |        |        |
|     | Yes (22 are at SAC                | 39   | 19     | 58     |
|     | No now P.T. & F.T.)               | 56   | 66     | 122    |
| 7.  | Location of school -              |      |        |        |
|     | Orange County                     | 9    | 9      | 18     |
|     | Other California                  | 5    | 3      | 8      |
|     | Out of California                 | 4    | 2      | 6      |
| 8.  | Degrees earned -                  |      |        |        |
|     | AA                                | 16   | 20     | 36     |
|     | BA                                | 5    | 2      | 7      |
|     | MA                                | 2    | 0      | 2      |
|     | No response                       | 72   | 63     | 135    |
| 9.  | Present activity -                |      |        |        |
|     | Employed full-time                | 54   | 47     | 101    |
|     | Employed part-time                | 10   | 16     | 26     |
|     | Unemployed                        | 2    | 3      | 5      |
|     | Housewife                         | 0    | 13     | 13     |
|     | In school full-time               | 15   | 7      | 22     |
|     | In school part-time               | 18   | 11     | 29     |
|     | Armed Forces                      | 19   | 0      | 19     |
|     | Self-employed                     | 8    | 4      | 12     |
|     | Other                             | 0    | 0      | 0      |
|     | No response                       | 0    | 0      | 0      |
| 10. | Job related to school work? -     |      |        |        |
|     | Very much                         | 40   | 39     | 79     |
|     | Some                              | 8    | 19     | 27     |
|     | Not at all                        | 19   | 13     | 32     |
|     | No response                       | 26   | 14     | 42     |

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TABLE III

ANALYSIS OF COURSE RELEVANCE  
TO CURRENT EMPLOYMENT

| Vocational Course               | Number Responding | Number Employed | Degree of Relevance |          |            |
|---------------------------------|-------------------|-----------------|---------------------|----------|------------|
|                                 |                   |                 | Very Much           | Some     | Not at all |
| Airline Stewardess              | 24                | 20              | 8                   | 5        | 7          |
| Auto 54 Applied Sci.            | 11                | 6               | 4                   | 1        | 1          |
| Auto 55 Chassis                 | 4                 | 0               | 0                   | 0        | 0          |
| Bus. 2 Tax Accounting           | 10                | 9               | 2                   | 1        | 6          |
| Bus. 22 Bus. Communic.          | 9                 | 5               | 4                   | 0        | 1          |
| Bus. 35B Cobol Progr.           | 12                | 10              | 7                   | 2        | 1          |
| Bus. 50 M'ise. Sem.             | 9                 | 7               | 6                   | 0        | 1          |
| Bus. 81C Advcd. Typing          | 13                | 10              | 6                   | 4        | 0          |
| Bus. 82 Office Proc.            | 6                 | 4               | 3                   | 1        | 0          |
| Bus. 86 Bus. Math-Mach.         | 15                | 11              | 5                   | 3        | 3          |
| Bus. 87 Introd. to Bus.         | 10                | 9               | 5                   | 2        | 2          |
| Bus. 96 Real Estate Appr.       | 6                 | 6               | 5                   | 0        | 1          |
| Bus. 99 Real Estate Exchge.     | 6                 | 6               | 5                   | 0        | 1          |
| Computer Science 2B             | 5                 | 5               | 2                   | 3        | 0          |
| Diesel 60 AD Eng. O.H.          | 2                 | 2               | 2                   | 0        | 0          |
| Elect. 68B Advcd. Engr.         | 3                 | 1               | 0                   | 0        | 1          |
| Engr. 2A Advcd. Prob. Survey    | 15                | 14              | 11                  | 3        | 0          |
| Engr. 9AD Mach. Shop Practice   | 4                 | 3               | 1                   | 0        | 2          |
| Engr. 12-22-24 Tool & Mach dwg. | 4                 | 3               | 0                   | 0        | 3          |
| Engr. 15 Architectural Dwg.     | 5                 | 2               | 0                   | 1        | 1          |
| Engr. 80 AD Engr. Drafting      | 3                 | 2               | 2                   | 0        | 0          |
| Mach. Shop 71B Advanced         | 2                 | 0               | 0                   | 0        | 0          |
| Welding 75B Elec. Arc           | <u>2</u>          | <u>2</u>        | <u>1</u>            | <u>0</u> | <u>1</u>   |
| Totals                          | 180               | 137             | 79                  | 26       | 32         |

TABLE IV

## Grade Distribution by Per Cent

Subject **BEST COPY AVAILABLE**

|                                | Answering Questionnaire |            |            |            |            | Not Answering |            |            |            |            |
|--------------------------------|-------------------------|------------|------------|------------|------------|---------------|------------|------------|------------|------------|
|                                | A                       | B          | C          | D          | Other      | A             | B          | C          | D          | Other      |
| Airline Stewardess             | 28                      | 36         | 32         | 0          | 4          | 19            | 29         | 29         | 7          | 16         |
| Auto 54 Applied Science        | 27                      | 9          | 18         | 9          | 37         | 9             | 38         | 24         | 0          | 29         |
| Auto 55 Chassis                | 20                      | 40         | 20         | 0          | 20         | 0             | 20         | 27         | 0          | 53         |
| Business 2 Tax Acctg.          | 20                      | 50         | 0          | 0          | 30         | 6             | 12         | 17         | 0          | 65         |
| Business 22 Bus. Commun.       | 18                      | 18         | 46         | 9          | 9          | 12            | 12         | 19         | 13         | 44         |
| Business 35B Cobol Prog.       | 8                       | 8          | 25         | 42         | 17         | 11            | 5          | 14         | 28         | 42         |
| Business 50 Mdse. Sem. W.S.    | 42                      | 25         | 0          | 0          | 33         | 59            | 24         | 3          | 0          | 14         |
| Business 81C Advcd. Type       | 0                       | 13         | 54         | 0          | 33         | 13            | 21         | 33         | 4          | 29         |
| Business 82 Office Proc.       | 10                      | 20         | 40         | 10         | 20         | 14            | 14         | 22         | 14         | 36         |
| Business 86 Bus. Math          | 14                      | 22         | 41         | 9          | 14         | 6             | 21         | 21         | 21         | 31         |
| Business 87 Introd. to Bus.    | 9                       | 18         | 9          | 27         | 37         | 4             | 17         | 33         | 13         | 33         |
| Business 96 Real Estate Appr.  | 17                      | 50         | 33         | 0          | 0          | 20            | 20         | 30         | 0          | 30         |
| Business 99 Real Estate Exchge | 0                       | 63         | 37         | 0          | 0          | 0             | 35         | 54         | 11         | 0          |
| Computer Science               | 100                     | 0          | 0          | 0          | 0          | 50            | 0          | 0          | 0          | 50         |
| Diesel 60 AD Eng. OH           | 33                      | 0          | 0          | 0          | 67         | 17            | 35         | 22         | 0          | 26         |
| Elect. 68B Advcd. Engr.        | 0                       | 0          | 100        | 0          | 0          | 0             | 60         | 40         | 0          | 0          |
| Engineering 2A Adv. Problems   | 0                       | 13         | 21         | 13         | 53         | 5             | 16         | 16         | 0          | 63         |
| Engineering 9 AD Machine Shop  | 50                      | 50         | 0          | 0          | 0          | 21            | 42         | 7          | 30         | 0          |
| Engineering 12-22-24 Tool Dwg. | 50                      | 25         | 25         | 0          | 0          | 6             | 31         | 31         | 12         | 20         |
| Engineering 15 Archit. Dwg.    | 20                      | 20         | 20         | 20         | 20         | 19            | 19         | 31         | 6          | 25         |
| Engineering 80 AD Engr. Draft. | 25                      | 25         | 50         | 0          | 0          | 33            | 47         | 7          | 0          | 13         |
| Machine Shop 71B Advcd.        | 0                       | 50         | 50         | 0          | 0          | 14            | 14         | 29         | 14         | 29         |
| Welding 75B Elec. Arc          | 75                      | 25         | 0          | 0          | 0          | 17            | 42         | 25         | 8          | 8          |
| <b>Totals</b>                  | <b>566</b>              | <b>580</b> | <b>621</b> | <b>139</b> | <b>194</b> | <b>355</b>    | <b>574</b> | <b>534</b> | <b>181</b> | <b>656</b> |
| <b>Averages</b>                | <b>25</b>               | <b>25</b>  | <b>27</b>  | <b>6</b>   | <b>17</b>  | <b>15</b>     | <b>25</b>  | <b>23</b>  | <b>8</b>   | <b>29</b>  |

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TABLE V

PROBABLE COURSE RELEVANCE  
TO CURRENT EMPLOYMENT

| <u>Vocational Course</u>     | <u>Number<br/>Enrolled</u> | <u>Number<br/>Employed</u> | <u>Degree of Relevance</u> |             |                   |
|------------------------------|----------------------------|----------------------------|----------------------------|-------------|-------------------|
|                              |                            |                            | <u>Very Much</u>           | <u>Some</u> | <u>Not at all</u> |
| Airline Stewardess           | 56                         | 46                         | 11                         | 7           | 28                |
| Auto 54 Applied Sci.         | 40                         | 22                         | 9                          | 2           | 11                |
| Auto 55 Chassis              | 16                         | 0                          | 0                          | 0           | 0                 |
| Bus 2 Tax Acctg.             | 27                         | 24                         | 3                          | 2           | 19                |
| Bus 22 Bus. Commun.          | 27                         | 15                         | 7                          | 0           | 8                 |
| Bus 35B Cobol Progr.         | 51                         | 43                         | 18                         | 5           | 20                |
| Bus 50 Mdse. Sem.            | 40                         | 31                         | 16                         | 0           | 15                |
| Bus 81C Advcd Typing         | 34                         | 26                         | 10                         | 7           | 9                 |
| Bus 82 Office Proc.          | 21                         | 15                         | 6                          | 2           | 7                 |
| Bus 86 Bus. Math             | 40                         | 36                         | 8                          | 5           | 23                |
| Bus 87 Introd. to Bus.       | 34                         | 23                         | 10                         | 4           | 9                 |
| Bus 96 Real Estate Appr.     | 14                         | 14                         | 7                          | 0           | 7                 |
| Bus 99 Real Estate Exchg.    | 33                         | 33                         | 16                         | 0           | 17                |
| Computer Science 2B          | 10                         | 10                         | 2                          | 4           | 4                 |
| Diesel 60 AD Eng. O.H.       | 21                         | 21                         | 13                         | 0           | 8                 |
| Elect. 68B Advcd. Engr.      | 8                          | 3                          | 0                          | 0           | 3                 |
| Engr. 2A Advcd Prob. Survey  | 36                         | 34                         | 16                         | 4           | 14                |
| Engr. 9AD Mach Shop Practice | 15                         | 11                         | 2                          | 0           | 9                 |
| Engr. 12 Tool & Mach Dwg.    | 18                         | 16                         | 0                          | 0           | 16                |
| Engr. 15 Arch. Dwg.          | 24                         | 10                         | 0                          | 3           | 7                 |
| Engr. 80 Engr. Drafting      | 15                         | 10                         | 6                          | 0           | 4                 |
| Machine Shop 71B Advcd.      | 8                          | 0                          | 0                          | 0           | 0                 |
| Welding, Elec Arc            | <u>11</u>                  | <u>11</u>                  | <u>3</u>                   | <u>0</u>    | <u>8</u>          |
| <b>Totals</b>                | <b>599</b>                 | <b>454</b>                 | <b>163</b>                 | <b>45</b>   | <b>246</b>        |

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ANALYSIS OF THE RELATIONSHIP BETWEEN  
VOCATIONAL CURRICULA AND OCCUPATIONAL GOALS  
(ABSTRACT)

Purpose

This study was undertaken to determine if Santa Ana College was successfully preparing students in certain vocational areas for employment in their chosen fields. The subject population in the study consisted of students enrolled in advanced courses in Business and Technical Arts curricula in the spring of 1974. A total of 599 questionnaires were distributed, of which 180 were returned.

Findings

The summary of the data on the 180 respondents showed that more than half were married and that women were slightly more inclined to respond to the questionnaire than were men. Most of the group was currently employed and had not attended any other college after leaving Santa Ana College. About 76% of those working indicated that their jobs were related to their course work at Santa Ana College.

There was a wide range or variation in the degree of relevance between course work and current employment. Of the 15 Surveying Students who responded, there were 14 currently employed. All 14 indicated that their course work was job-related. At the other extreme, 6 of 9 respondents who had been enrolled in Tax Accounting said that their current jobs were not related at all to their course work.

The group which did not answer the questionnaire had a higher percentage of students who did not earn credit. There was also a higher rate of response among "A" students. However, no significant difference was apparent for students earning "B's", "C's", or "D's".

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