AN ABSTRACT OF THE THESIS OF

David Palmer Raynalds for the M. Ed. in Agricultural Education (Degree)

Date thesis is presented 8-10-66

Title PREPARATION OF VOCATIONAL-TECHNICAL TEACHERS IN SELECTED COMMUNITY COLLEGES

Abstract approved Redacted for Privacy

(Major professor)

The increasing demand for vocational-technical training at the community college level stems from four interrelated factors: the impact of automation and technology, the rapid population increase, the social awareness of the economic plight of minority groups, and concern for the non-college-bound high school graduate or drop-out. As a result, community colleges are increasing vocational-technical programs, both in numbers and kinds.

The purpose of this study is to gather information about the source, education, and work backgrounds of vocational-technical teachers in community colleges in Oregon, Washington, and Northern California.

The summary of studies and related materials reveals that there is a shortage of qualified vocational-technical teachers. The projected growth of community colleges' vocational-technical programs will place more demands on the available supply of these
teachers. In order to meet present needs, community colleges are actively recruiting teachers from other educational institutions, business and industry, military retiree ranks, and from graduating classes of colleges and universities.

Findings related to the purpose of this study reveal: The high schools contribute the largest number of experienced teachers to community colleges in the Pacific Northwest. Almost one-half of the vocational-technical teachers in these colleges have taught less than three years. Three-fourths of the teachers have been in their present teaching position less than six years. Some of these teachers have not graduated from high school--others have doctors degrees.

There is a need for uniform standards of education, related work experience, and teacher preparation as a basis for certification of vocational-technical teachers.
PREPARATION OF VOCATIONAL-TECHNICAL TEACHERS IN SELECTED COMMUNITY COLLEGES

by

DAVID PALMER RAYNALDS

A THESIS

submitted to

OREGON STATE UNIVERSITY

in partial fulfillment of
the requirements for the
degree of

MASTER OF EDUCATION

June 1967
APPROVED:

Redacted for Privacy

Professor and Head of Department of Agriculture Education
In Charge of Major

Redacted for Privacy

Dean of Graduate School

Date thesis is presented 8-10-66

Typed by Donna Olson
ACKNOWLEDGEMENTS

My appreciation is extended to Dr. Henry Ten Pas for his guidance and encouragement throughout the course of this study.

Thanks to Dr. Phil Davis for his assistance during the initial organization of this study.

The constructive suggestions given by Robert Mobley were helpful. I appreciate his interest.

Thanks to Dr. George Storm for reading this study.

My utmost gratitude is directed to my family. Typing, folding questionnaires, sealing envelopes, and giving encouragement helped me complete the study.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. INTRODUCTION AND BACKGROUND</strong></td>
<td></td>
</tr>
<tr>
<td>Purpose of the Study and Statement of the Problem</td>
<td>3</td>
</tr>
<tr>
<td>Limitations of This Study</td>
<td>5</td>
</tr>
<tr>
<td>Procedure</td>
<td>6</td>
</tr>
<tr>
<td>History of the Community College</td>
<td>7</td>
</tr>
<tr>
<td>Definitions of Words and Terms</td>
<td>9</td>
</tr>
<tr>
<td><strong>II. RESEARCH AND RELATED MATERIAL</strong></td>
<td>11</td>
</tr>
<tr>
<td><strong>III. FINDINGS</strong></td>
<td>19</td>
</tr>
<tr>
<td><strong>IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS</strong></td>
<td>27</td>
</tr>
<tr>
<td>Conclusions</td>
<td>27</td>
</tr>
<tr>
<td>Recommendations</td>
<td>29</td>
</tr>
<tr>
<td><strong>BIBLIOGRAPHY</strong></td>
<td>30</td>
</tr>
<tr>
<td><strong>APPENDIX I</strong></td>
<td>33</td>
</tr>
<tr>
<td><strong>APPENDIX II</strong></td>
<td>34</td>
</tr>
</tbody>
</table>
LIST OF CHARTS

<table>
<thead>
<tr>
<th>Chart</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Original source of 256 vocational-technical teachers in 23 Pacific Northwest community colleges for the 1965-1966 school year.</td>
<td>20</td>
</tr>
<tr>
<td>II. Types of teaching background of the 118 vocational-technical instructors in 23 Pacific Northwest community colleges having had teaching experience.</td>
<td>21</td>
</tr>
</tbody>
</table>

LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Summary of years teaching experience according to subject area and teacher's state</td>
<td>22</td>
</tr>
<tr>
<td>2. Summary of years taught in present position according to subject area and teacher's state</td>
<td>23</td>
</tr>
<tr>
<td>3. Summary of education background according to subject area and teacher's state</td>
<td>24</td>
</tr>
<tr>
<td>4. Related work experience of 100 instructors coming from business and industry to their first teaching position</td>
<td>25</td>
</tr>
</tbody>
</table>
The mid-sixties' working world has placed a premium upon vocational and technical training. Answering this demand with new, larger, and diversified programs, the community college "makes vocational and technical education programs a major part of their mission and a fundamental institutional objective" (27, p. 165).

The expansion of new vocational-technical education is not simply an innovation of ambitious educators, but is precipitated by hard reality. This reality is well stated by Venn (27, p. 1):

Technological change has, rather suddenly, thrown up a dramatic challenge to this nation's political, economical, social, and educational institutions. Though the full scope of this challenge may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of American education. All levels of education, and particularly post secondary education, must quickly move to assume greater responsibilities for preparing men and women for entry into the changed and changing world of technological work. Unless far more and far better education on the semi-professional, technical, and skilled levels is soon made available to greater numbers of citizens, the national economy and social structure will suffer irreparable damage.

Prior to the passage of Title VIII of the National Defense Education Act, less than 16,000 technicians were being formally prepared to work with physical scientists and engineers--studies
showed a need for 100,000. In 1958, some 260 schools were enrolling fewer than 20,000 students; by 1964, nearly 800 schools were training more than 90,000 persons for technical jobs. In addition to the increase in students preparing for jobs, Title VIII made possible the upgrading of skills of 128,000 employed, adult technical workers during 1964 (4, p. 4-5).

Many forces have increased the need for work-world education. Included in these forces are: the numerous post-World War II "baby boom" high school graduates or drop-outs; the impact of automation ousting unskilled workers and demanding trained personnel; public concern for persistent unemployment of these unskilled or wrongly-skilled workers; and increased availability of state and federal funds for vocational education.

Legislation enabling the establishment and expansion of community colleges has recently been enacted both on the state and federal levels. As one of the faster-growing segments of the recent educational effort, the community college must accept a unique position in the fulfillment of its post-secondary role.

The instructional programs of community colleges call for teachers of unusual qualities. These teachers must be sympathetically aware of the college's community positions, willing to perceive community needs, and ready to instruct—not traditional college students—but community citizens in the new vocational-technical
programs. Being a vocational or technical teacher creates a need for unique abilities in addition to those required of academic specialists. Unlike academic programs which easily extend through, not only four years of college, but graduate school and numerous degrees, vocational-technical curriculums often terminate in two years or less. A vocational teacher must be acutely aware of the problems of his trainees once graduated, and prepare his students to meet these difficulties, while an academic teacher often concentrates on "cultural enrichment," leaving the student to apply, his knowledge. Teaching with expensive equipment, visits to industry, and co-operative on-the-job-training are constant tools of the vocational instructor, while the academic teacher may be confined to the classroom and has to rely chiefly on his voice and text. Vocational programs must adapt to rapid technological changes--academic programs also adjust to present-day requirements but these changes are frequently based upon natural laws, proven theories, and the classics.

Purpose of the Study and Statement of the Problem

The purpose of this study is to gather information about the source, education, and work background of vocational-technical teachers in community colleges in Oregon, Washington, and Northern California.
The community colleges encounter many difficulties while staffing their vocational-technical programs. There is no ready source of qualified instructors. Some teaching positions are filled with instructors who are deficient in occupational experience and adequate teacher preparation and have limited education backgrounds. With new emphasis being placed upon vocational and technical training for an enlarging portion of the population, the demand for instructional staff is not likely to diminish and is most likely to become critical.

Competition for vocational-technical teachers is intense. The work experiences and educational requirements for the prospective technical teacher ideally suit the modernized needs of industry. Compounding this problem is the competition between educational institutions, both post-high school and high school.

To date there has been a lack of training programs geared to meet the needs of prospective vocational-technical teachers. Teacher-trainer institutions have not been able to meet the challenge of developing programs that attract sufficient numbers of prospective vocational-technical teachers. Colleges and universities involved in teacher training have not made adequate efforts to provide facilities, staff, and leadership to prepare enough high-quality teachers for the student who will enter the present and future world of work.
Degree and/or certification requirements for the vocational-technical teacher are not uniform among the various states. Occupational competency has long been regarded as a requisite of the vocational teachers (26, p. 121-122), yet some certification agencies emphasize the attainment of a college degree for teacher certification. Standards for certifying vocational-technical teachers are not present to the same degree as for other teaching personnel. Prospective teachers of community colleges thus have little basis for judging or evaluating their own training and competencies. Within the community college, the degree requirement—or lack of it—may create dissention between teachers of college transfer courses and teachers of vocational-technical courses.

The problem is that there are insufficient vocational-technical teachers to staff present and projected vacancies in community colleges. In addition there is no concerted effort to set up programs to meet predetermined standards.

**Limitations of This Study**

The author has restricted the geographic scope of this study to the states of Oregon, Washington, and the northern part of California. Data gathered by the questionnaire technique is restricted to vocational-technical teachers who teach at least 12 hours per week, either as theory or laboratory time, or both. Individual
interpretation by those teachers completing the questionnaire places further limitations on the findings.

Procedure

The deans of vocational-technical education of community colleges included in this study have been requested to furnish names of vocational-technical teachers teaching at least 12 hours per week. A covering letter, questionnaire, and self-addressed envelope will be sent to the teachers named by the deans. The covering letter states that the purpose of the questionnaire is to help determine the source, work and teaching experience, and educational background of vocational-technical teachers in community and junior colleges in the Pacific Northwest.

Pertinent information to teaching experience includes: years taught, years in present position, teaching prior to present position—if yes—full time, vocational subjects, in what state, and type of school.

Questions about work experience are designed to ascertain if the responding teacher's work experience relates to his present teaching position. The number of years of work-related experience is asked for.

The education background of the teachers responding is described by their choice of these possibilities: non-high school
graduate, GED equivalency certificate, high school diploma, bachelors degree, masters degree, doctors degree. Space is provided to indicate additional college credits.

The questionnaire provides space for, and requests clarification of answer choices, if the respondent does not feel the answer choices are descriptive and accurate. Comments pertinent to the teacher's work and education background are requested.

A review of articles, primarily from educational and technical magazines and journals, theses studies, and personal correspondence is being made to substantiate or compare with findings in this study.

History of the Community College

The community college of the 1960's is a product of an evolving process dating back to the junior college movement of the early 20th century. Joliet Junior College, Joliet, Illinois, established in 1902, is generally conceded to be the first permanent, public junior college. Joliet Junior College developed under the sponsorship of the first president of the University of Chicago, Doctor William Harper, "Father of the Junior College" (8, p. 54-55).

Early establishment of junior colleges was, mainly, accomplished in these ways: decapitation or consolidation of weak four-year colleges into stronger two-year institutions; as branches of the
larger four-year colleges and universities; as extensions of secondary schools, and; as independent creations designed as entirely new educational units.

These educational institutions have searched for a name that might define their functions or describe their uniqueness. Two-year college, junior college, lower-division college, opportunity college, city college, district junior college, and community college have been some of the titles used by these institutions.

The purposes and functions of these institutions had, by 1930, broadened in scope making the word "junior" in junior college inappropriate. Writers were objecting to the term in reporting studies. For example (23, p. 121-123):

The term junior college is unfortunate. It is not junior to anything ... in primary or main function. It is senior to all common schooling below it--the capstone of socialization or civilizing education.

The President's Commission on Higher Education, 1947, suggested (12, p. 2-3) the name "community college" be applied to institutions designed to serve, chiefly, the local community needs. Hillway (12, p. 6) described the community college by saying,

It is an institution of higher learning aimed at serving the educational needs of a particular community; it is prevailingly a two-year college, and; it offers in its curriculum various program which prepare students to enter definite occupations.
The Junior College Directories of 1960 and 1965 show an increase in the number of two-year institutions in the United States from 400 in October, 1958 to 452 in October, 1963. The directories make no distinction between the various types of two-year institutions. Oregon showed an increase from two to eight during the above reporting period; Washington from 10 to 15; and California from 65 to 74 (1, p. 31-32) (2, p. 26). Oregon, Washington, and California are committed by legislation to the community college concept.

In 1959, the Oregon legislature passed the Area Education District Law which provides procedures for formation and some state funds for construction and operation of post-secondary institutions (21). The 1965 legislation further provides that these institutions shall include in their name the words "community college" (22).

The Vocational Act of 1963, Public Law 88-210, has given impetus to the formation of new community colleges and to reorganization of existing institutions into the community college structure.

Definitions of Words and Terms

Most of the words and terms used in this paper are familiar to those in the education field. Even with this familiarity, there is a rather wide interpretation of their meanings. As individuals other than professional educators may read this paper, the writer will clarify by definition their intended meanings.
Community colleges are post-secondary educational institutions offering comprehensive programs including lower division courses transferrable to four-year, baccalaureate degree-granting colleges and universities, and two-year or less terminal vocational and technical programs. Occupational extension, cultural enrichment, and self-improvement courses are made available to the community on basis of need and interest of its citizens.

Junior college is used synonymously with community college in this paper.

Technical instructors teach courses preparing students to exercise judgment and skill based on theory and scientific measurements. These courses generally require the students to become proficient in mathematics, physics, and/or natural sciences.

Vocational instructors teach courses preparing students to use skills and theoretical understandings of the application of these skills.

Work related experience is the knowledge and skill required of the teacher and acquired by participation in, or observation of, business and industry pertinent to subjects taught.
II. RESEARCH AND RELATED MATERIAL


This bulletin advertises one of the most urgent needs in American education today--the need for tens of thousands of new well-prepared instructors for community colleges in the next ten years.

The Council emphasized three crucial aspects of need--the minimum number of teachers needed, the relatively short time for preparing that number, and certain qualities essential in teachers for the vastly expanding community college field (3, p. 1).

Probably half of the 30,000 should be vocational-technical instructors with experience in business, industry, public service, and professions. They are particularly needed because more than 80 percent of the students graduating from the two-year community college or institutes will go immediately into business, industry, agriculture, or public service in the community or region, along with equal numbers who enroll but take less than two years (3, p. 3).

The council saw the ten-year period from 1948 to 1958 as the crucial period in the mature shaping of community colleges and technical institutions--the period of major opportunity for pioneering teachers.
and the period of major obligation for institutions preparing teachers (3, p. 2). This study points out that the need for vocational-technical teachers would not be a passing demand. Community colleges will look to graduate professional schools for at least 30,000 instructors every ten years for replacements and further expansion. The job that must be undertaken is not a temporary one (3, p. 2).

Garrison, writing in *Technical Education News*, October, 1965, repeats the need foreseen in 1948: "...by the best conservative estimates, the number of two-year college teachers needed by 1970 is about 100,000 more than are now employed" (10, p. 13). Not specifying the number of vocational-technical instructors needed, he, nevertheless, points to the need of technical education (10, p. 13):

> Junior colleges will have to find thousands of capable people, whether from industry, commerce, or other fields where they have been working successfully, to join us as teachers, to learn how to teach, and to become fully effective members of our faculties.


Adding to the existing shortage of qualified staff in ongoing programs, there is need for instructors in the new, emerging programs. To satisfy this shortage of qualified technical teachers in our two-year, post-high school, associate degree, technical programs, some
of the larger universities will have to assume a greater leadership role in developing new technical teacher-education programs.

California's Bureau of Junior College Education, issuing a report of faculty supply, retention, and needs in the public junior colleges in California, noted the need of instructors between October, 1963 and September, 1964. Of the 1,353 full-time teachers needed, 43.8 percent were replacements and 56.2 percent were needed for expanding programs and increased enrollments. The distribution of full-time teachers in 1963 shows 89 percent were teachers of "academic" subjects and 11 percent were teachers of "vocational-technical" subjects. On the basis of these percentages, about 150 full-time vocational-technical teachers were needed in 1963 (5, p. 3).

In 1965, the Division of Community Colleges and Vocational Education of Oregon projected the new positions in Oregon's community colleges for the ten-year period from 1965 to 1975. The estimate was based on community colleges in operation and those to be opened in the immediate future. The projection shows a ten-year need for 250 new full-time teachers in the fields of distribution and marketing, agriculture, home economics for gainful employment, trades and industries, and office occupations (20, p. 8, 14, 19, 30).

Venn expresses concern for the improvement and expansion of vocational and technical education because of the desperate shortage of qualified teachers and administrators: that, except in the
vocational agriculture and home-economics fields, there is a noticeable lack of teacher preparation and in-service training programs. Difficulties also exist in recruiting well-educated individuals with competence in a relevant occupational skill (27, p. 151-152).

A thesis study of teacher preparation of special instructors of adult vocational agriculture classes in Oregon emphasizes that the demand is greater for adult farmer courses than can be handled by local vocational agriculture teachers (14, p. 5). This study also points out that in 1963 seven Oregon community colleges were operating adult vocational agriculture programs, and as the programs expand the need for preparing more instructors will grow.

Recent correspondence from an Oregon community college is typical of the problem that administrators cope with when attempting to hire additional vocational-technical teachers. The following excerpt from a letter sent to this writer, dated May 24, 1966, from Robert Hawk, Dean of the Vocational-Technical Division of Blue Mountain Community College in Pendleton, is an example of the teacher shortage (11):

Reference is made to... information about problems, if any, when hiring instructors in the vocational-technical division of Blue Mountain Community College.

We experience considerable difficulty when attempting to fill teaching positions... We have a vacancy in the Civil Technology Department. Of the applicants we have had, they are either deficient in work experience or lack the education
background necessary for certification. The prospective teacher we would like to employ is working in industry and is making more money than we can offer.

The same situation prevails in our other technological departments.

Thus, the need for vocational-technical teachers in community colleges is illustrated by all foregoing examples, from the difficulty of hiring a single instructor, to the projected need for large numbers of new teachers.

Not only the need, but the source of new vocational-technical teachers is also commanding the attention of community colleges. The college administrators are seeking possible sources of instructors with determination as new programs emerge and established programs expand.

Many community colleges use part-time vocational-technical instructors. The use of part-time instructors has drawbacks, but the advantages are numerous. American community colleges would be hard pressed to offer the variety of vocational-technical programs currently available if it were not for the dedicated instruction provided by hundreds of part-time faculty members (13, p. 8). The part-time vocational-technical teacher from business or industry may bring new problems, and solutions to those problems, to the classroom that are unknown or unrecognized by the full-time community college faculty member. Obviously, however, the part-time
instructor may be deficient in the area of classroom management.

The part-time instructor in highly specialized technical fields may be the only source of instruction within these specialties. This is particularly true in technical fields where salaries outside teaching are much higher than those of educational institutions. People industrially employed are likely to be considerably more up-to-date on new developments than those confined to teaching within two or four year colleges (9, p. 8-12).

California has been a leader in establishing junior colleges in the United States. These institutions have made liberal use of part-time instructors. According to a statistical summary, there were 9,981 full-time and part-time certified employees in California's junior colleges in October, 1963 of which 9,014 were teachers. Of the 2,532 part-time teachers, about 30 percent were vocational teachers (5, p. 2).

This writer, as the director of evening school and department chairman of technical agriculture at Blue Mountain Community College, Pendleton, Oregon, has made extensive use of part-time instructors. During the school year of 1965-66, of the 36 instructors used in evening school and the technical agriculture department, 30 instructors taught vocational-technical subjects either in preparatory or occupational extension courses. Eighteen of the 30 part-time vocational-technical instructors are from public service, agriculture,
business, and industry. From an administrative point of view, problems include those of reports, grading, fee payment, records, and school policy regarding equipment and building use. It is also difficult to keep the part-time teacher informed about changes in schedules, school functions, and activities which may be of importance to his students.

Another possible source of vocational-technical teachers, both part and full-time, is retired persons. Business, professional, and military retirees are potential teachers, especially on a part-time basis. Administrators are beginning to recognize the relatively untapped potential of individuals retiring from careers in the military service. It is estimated 4,000 persons retiring from military service annually have college degrees. Many more not holding degrees are specialists having the necessary experience to qualify as technical instructors (15, p. 17-18).

Of full-time teachers, the high schools are the largest source. According to a six-year study made by the Research Division of the National Education Association, the major sources are high schools 31 percent, graduate schools 24 percent, college or university teaching 17 percent, and business occupations 11 percent. This study was reported in 1963 (16, p. 7). A similar NEA study of the new teachers hired in public junior colleges in the school years of 1963-1964 and 1964-1965 revealed little change in the source of teachers (17,
All these varying sources have fallen far short of meeting the critical need for vocational-technical teachers in community colleges.

A recent related study by Storm, The Successful Teacher in Technical Education, indicates successful teachers at community college level had experience in industry and entered teaching at an approximate age of 30. The teachers in technical fields recommended prior industrial experience and qualifying examinations as requirements for teaching (25, p. 76).
III. FINDINGS

The following series of charts and tables summarize primary research obtained by questionnaire from 256 vocational-technical instructors. These teachers were employed by 23 community colleges in Oregon, Washington, and Northern California during the 1965-1966 school year.

All data relates to the education and work backgrounds, the teaching experience, and the source of the instructors.

The fact-gathering questionnaire from which the information has been tabulated is found in the appendix. Pertinent comments from the questionnaire's respondents are included in this chapter.
*Includes prisons, business colleges, service schools, hospitals, and industry.

Chart II. Types of teaching background of the 118 vocational-technical instructors in 23 Pacific Northwest community colleges having had teaching experience.
Table 1. Summary of years teaching experience according to subject area and teacher's state

<table>
<thead>
<tr>
<th>Subject Area And State</th>
<th>Years Teaching Experience*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 or less</td>
</tr>
<tr>
<td>Nursing and Dental</td>
<td>40.0</td>
</tr>
<tr>
<td>Electronics</td>
<td>20.7</td>
</tr>
<tr>
<td>Civil and Drafting</td>
<td>30.4</td>
</tr>
<tr>
<td>Mechanics, Auto, Diesel, Welding</td>
<td>20.4</td>
</tr>
<tr>
<td>Business, Office Occupations</td>
<td>22.8</td>
</tr>
<tr>
<td>Ag and Forestry</td>
<td>25.0</td>
</tr>
<tr>
<td>Engineering, Tech. Math, and Physics</td>
<td>20.0</td>
</tr>
<tr>
<td>Other (7% of total)</td>
<td>16.7</td>
</tr>
<tr>
<td>California Teachers</td>
<td>10.0</td>
</tr>
<tr>
<td>Oregon Teachers</td>
<td>22.6</td>
</tr>
<tr>
<td>Washington Teachers</td>
<td>32.7</td>
</tr>
<tr>
<td>All Teachers</td>
<td>25.1</td>
</tr>
</tbody>
</table>

*All figures are given in percent.
Table 2. Summary of years taught in present position according to subject area and teacher's state

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Years in Present Position*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 or less</td>
</tr>
<tr>
<td>Nursing and Dental</td>
<td>62.5</td>
</tr>
<tr>
<td>Electronics</td>
<td>27.5</td>
</tr>
<tr>
<td>Civil and Drafting</td>
<td>48.0</td>
</tr>
<tr>
<td>Mechanics, Auto Diesel, Welding</td>
<td>30.6</td>
</tr>
<tr>
<td>Business, Office Occupations</td>
<td>60.0</td>
</tr>
<tr>
<td>Ag and Forestry</td>
<td>50.0</td>
</tr>
<tr>
<td>Engineering, Tech. Math, and Physics</td>
<td>60.0</td>
</tr>
<tr>
<td>Other (7% of total)</td>
<td>38.9</td>
</tr>
<tr>
<td>California Teachers</td>
<td>28.0</td>
</tr>
<tr>
<td>Oregon Teachers</td>
<td>50.0</td>
</tr>
<tr>
<td>Washington Teachers</td>
<td>55.8</td>
</tr>
<tr>
<td>All Teachers</td>
<td>48.4</td>
</tr>
</tbody>
</table>

*All figures are given in percent.
Table 3. Summary of education background according to subject area and teachers' state

<table>
<thead>
<tr>
<th>Subject Area And State</th>
<th>Education Background*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non High School</td>
</tr>
<tr>
<td>Nursing and Dental</td>
<td>---</td>
</tr>
<tr>
<td>Electronics</td>
<td>---</td>
</tr>
<tr>
<td>Civil and Drafting</td>
<td>---</td>
</tr>
<tr>
<td>Mechanics, Auto Diesel, Welding</td>
<td>4.1</td>
</tr>
<tr>
<td>Business, Office Occupations</td>
<td>---</td>
</tr>
<tr>
<td>Ag and Forestry</td>
<td>---</td>
</tr>
<tr>
<td>Engineering, Tech. Math, and Physics</td>
<td>---</td>
</tr>
<tr>
<td>Other (7% of total)</td>
<td>---</td>
</tr>
<tr>
<td>California Teachers</td>
<td>---</td>
</tr>
<tr>
<td>Oregon Teachers</td>
<td>2.4</td>
</tr>
<tr>
<td>Washington Teachers</td>
<td>---</td>
</tr>
<tr>
<td>All Teachers</td>
<td>.8</td>
</tr>
</tbody>
</table>

*Education background is given in terms of most advanced certificate, diploma, or degree. All figures are given in percent.
Table 4. Related work experience of 100 instructors coming from business and industry to their first teaching position

<table>
<thead>
<tr>
<th>Years of Related Work Experience</th>
<th>2 or less</th>
<th>3-5</th>
<th>6-10</th>
<th>11-20</th>
<th>over 20</th>
<th>not indicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 or less</td>
<td>4</td>
<td>14</td>
<td>27</td>
<td>31</td>
<td>17</td>
<td>7</td>
</tr>
</tbody>
</table>

Of the 38 instructors coming directly from school to their present position, 50 percent were employed in jobs which related to their present teaching assignment.

Responding to the question, "In what state were you teaching when you accepted your present position?" only 7.8 percent indicated they were formerly teaching in a different state.

The respondents of the questionnaire are invited to give opinions as "other comments or explanations you think are pertinent to your work and educational background." Some of the subjective data compiled from their comments follow:

- Too much pressure is put on vocational people to acquire a bachelor's degree. Industry is advancing so rapidly that an instructor can not keep up and also work for a degree.

- Pressure is applied by administration to obtain degree.

- Why anyone with four years college, apprenticeship, and a few years of trade experience would consider teaching at today's school salary is either a humanitarian or independently wealthy.

- I am concerned since I would like to see good
teaching continue without so much emphasis on college training to replace trade experience.

Develop and stress new modern technical processes and procedures for today's industry--today's training is outdated.

In-service teaching methods at ______ were of extreme help in adjusting from secretarial to teaching profession.

People who can draw on practical experiences in the fields in which they teach are appreciated by our students.

As a vocational instructor, I find work or trade experience more valuable than formal education.

Due to these facts: the pay is less than industry (for knowledge); the hours (including homework) are longer than industry; the responsibility is similar to the Navy's Chain of Command, I intend to complete my contractual responsibilities, then back to industry--even tho (sic) I enjoy teaching these students.

I believe college credit should be awarded for experience which could be applied to a degree in industrial education.
IV. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The data gathered reveals the following relative to the purpose of the study.

High schools contribute the largest number of experienced vocational-technical instructors to community colleges in Oregon, Washington, and Northern California.

Forty-eight percent of the vocational-technical instructors responding have taught five years or less—seventy-five percent have been in their present position five years or less.

These instructors have divergent education and work backgrounds. Some have not graduated from high school, others have earned doctors degrees. Their work backgrounds range from no experience to more than 20 years on jobs that relate to their present teaching position.

Conclusions

There is a shortage of qualified teachers for the growing number of community college vocational-technical programs. It is
evident that more teachers must be recruited and prepared to teach if community colleges accomplish their goal of serving the needs of their communities' citizens. Business and industry, organized labor, teacher-training institutions, certification agencies, and community colleges should join in a co-operative effort to alleviate the shortage of vocational-technical teachers for the community colleges.

Community colleges should not depend upon high schools as a major source of qualified vocational-technical instructors--this practice of proselytism will weaken vocational-technical training at the secondary level.

Although the recent development of community colleges has not provided extended years of teaching experience, industry is attracting vocational-technical teachers from community colleges. In order to maintain the benefits of high quality teachers, community colleges will have to compete wage-wise with industry for the services of these teachers. Industry, in turn, must co-operate by making their qualified personnel available, at least part-time, to teach in vocational-technical programs.

There is evidence that teachers coming directly from industry are skeptical of the value of teacher education. Most of these teachers have only a high school education, explaining, perhaps, their low regard for education not acquired in a working situation. Also, teacher education may have failed to serve their needs.
Inevitably the economic law of supply and demand will exert its influence. If salary incentives and other inducements are not achieved, either programs will be curtailed or certification standards reduced.

Recommendations

The specific recommendations of this study are directed to community colleges, educational researchers, agencies responsible for the certification of community college vocational-technical teachers, and institutions training teachers for community college vocational-technical programs. The following recommendations are made:

1. more data be gathered on the specific need for and source of community college vocational-technical teachers,

2. uniform standards of education, related work experience, and teacher preparation of vocational-technical instructors be adopted as a basis for certification,

3. a special system of teacher education be implemented by teacher training institutions to fit the needs of community college vocational-technical instructors.
BIBLIOGRAPHY


APPENDICES
Dear ________________:

The purpose of my letter is to determine the source, work and teaching experience, and educational background of vocational-technical instructors in community and junior colleges in the Pacific Northwest. This research is undertaken as part of my advanced degree requirements.

I have structured the enclosed questionnaire in such a manner that it will require a minimum of time to fill out. Will you kindly complete the questionnaire and return it in the enclosed stamped envelope?

Thank you for helping define and attack a problem that effects your and my success as workers in vocational education.

Sincerely,

David P. Raynalds, Director
Evening School
Blue Mountain Community College

DPR:lm
APPENDIX II

QUESTIONNAIRE SENT TO VOCATIONAL-TECHNICAL TEACHERS

WORK AND TEACHING BACKGROUND

I. How many years have you taught? ..................... ________ years

II. How many years have you taught
in your present position? ..................... ________ years

III. How many classroom and laboratory
hours do you teach each week? ............... ________ hours

IV. Were you teaching immediately prior
to accepting your present position?......... Yes ___ No ___
(If you answered YES, complete
SECTION A; if you answered NO,
omit A and proceed to SECTION B.
)

SECTION A

1. Were you teaching vocational subjects
when you accepted your present position?..... Yes ___ No ___

2. Were you teaching full time? ................. Yes ___ No ___

3. In what state were you teaching?.......... ______________

4. Check the type of school in which you taught:

   high school
   Technical institute
   community college
   junior college
   four-year college
   university

   None of the above ___ . Please Clarify______________________
SECTION B

Omit B if you completed section A.

1. Prior to your present position, which of the following describes what you were doing?

- attending school full time ___
- working full time ___
- attending school & working ___

None of the above ___.

Explain ____________________________________________.

(Omit the next two items if you were not working either full or part time.)

2. Did your work relate to your present teaching position?.................Yes ___ No ___

3. If you answered Yes to question #2, please describe your former employment. (i.e. 3 years apprenticeship, 4 years journeyman pretzel bender, 2 years owner-manager pretzel factory.)

OR

(1 year clerk-typist, 2 years secretary, 2 years assistant office manager.)

EDUCATIONAL BACKGROUND

1. Check the appropriate description of your education.

- non-high school graduate ___
- GED equivalency certificate ___
- high school diploma ___
- bachelors degree ___
- masters degree ___
- doctors degree ___
2. If the above does not describe your education, please clarify.

3. In addition to the above education, how many college credits have you earned? ........... _____ credits

4. Were these credits designated as semester or quarter hours? semester____ quarter____

If you have school duties in addition to teaching, please list.

Other comments or explanations you think are pertinent to your work and educational background: