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State of Iowa  
1966

STATUS OF VOCATIONAL TEACHER EDUCATION  
IN IOWA

State of Iowa  
Department of Public Instruction  
Des Moines, Iowa

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## I N T R O D U C T I O N

Educators and lay citizens across the country are giving increased attention to vocational and technical education. Recent acts of Congress and state legislatures have made increasing amounts of money available for financing expanded programs and facilities for vocationally orientated education.

In Iowa, particularly, the industrial and business climate is right for the promulgation of expanded offerings in vocational and technical education. Evidence of readiness is exemplified in the action of the Sixty-first General Assembly which passed Senate File 550 providing for area vocational schools and area community colleges within the state.

In addition to this new "injection" given to vocational and technical education by recent legislation, existing community school districts are experiencing increasing enrollments and facility expansion in their present vocational programs.

As the State of Iowa moves to extend educational services and opportunities to more of its citizens, there will be an increasing need for vocational-technical teachers. Development of area schools cannot be accomplished solely by centering attention on curriculum, organization, buildings, and finance. To these must be added definite plans for the preparation of competent professional staff members.

The subject of competent vocational teachers and development of effective educational faculties are not problems unique to Iowa. Every state in the nation is, or will be, faced with having to staff classrooms and laboratories with people trained in a trade and prepared to teach. Colleges and universities with teacher education responsibilities are at this time revising their curriculums and evaluating course content to adjust

teacher education programs to provide teachers proficient to teach the industrial-vocational subjects. Correspondence is being exchanged between institutions of higher learning as to progress and direction in this respect.

Graduate students are now conducting research on topics which center on the education and preparation of vocational-technical teachers. Educational periodicals devote articles to the competencies and education of vocational teachers.

"The importance of keeping abreast in vocational teacher education has been recognized since the Federal government began to support vocational education. The Commission on National Aid to Vocational Education reported in 1914 — 'the development of vocational education along right lines will depend largely upon the ability to secure and retain well-trained teachers who have a thorough and practical knowledge of subjects.' It naturally developed that teacher education programs at land-grant colleges and universities had the resources to conduct such programs. Assistance came from state departments of education and state boards of vocational education."<sup>1</sup> Through the years, the following areas have come to be included in the field of vocational education: Agriculture, home economics, business education, trade and industrial and technical education, guidance, and health occupations. In the sections that follow in this report, each of these areas is separately reviewed to present the status of vocational teacher education in Iowa. Each section concludes with information about the institutions offering instruction, personnel involved, number of recent graduates, students presently enrolled, and financial support.

In Iowa, nearly all of the pre-service vocational teacher education is conducted at the three state schools: Iowa State University, State College

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<sup>1</sup> Ralph E. Bender, "Teacher Preparation for Vocational Education," Theory Into Practice, III (December, 1964), p. 189.



of Iowa, and the University of Iowa. State and Federal funds available for teacher education are disbursed to the vocational programs at these institutions. In-service education of vocational teachers is provided through the cooperative effort of these institutions and the State Department of Public Instruction.

## SECTION 1

### A G R I C U L T U R E

#### New and Expanded Programs

A new title is emerging in the agriculture field; it is "Agri-business." This title has been coined in order to give attention to the changing role of vocational agricultural programs. Vocational agriculture teachers now find it necessary to include an increased amount of instruction for off-farm occupations. High school and junior college students seek preparation for farm-related vocations such as feed and fertilizer marketing, farm supply management, and equipment and farm mechanics.

#### Teacher Education and Qualification

Teachers of vocational agriculture (agri-business) in the future will need pre-service and in-service preparation which will include course work that gives attention to "business related" subject matter in addition to the "usual" agricultural courses.

#### Eye to the Future

All vocational agriculture teachers are graduates of four-year institutions that offer approved teacher education programs. Thus, all practicing vocational agriculture teachers have earned a baccalaureate, or higher, degree and are qualified for professional teaching certificates.

Increased interest in agricultural technology and agri-business is expected to foster additional post-high school programs. This may result in a request for vocational agriculture teachers who have less than a college degree but have a "strong suit" in their occupational experience.

#### Facts and Figures Concerning Agriculture Teacher Education

- Institution involved in teacher training:

Iowa State University

- Number of faculty members at Iowa State University concerned with Vocational Agriculture teacher education.

Six

- Federal and state funds disbursed to Iowa State University for Vocational Agriculture teacher education, 1964-65:

\$10,000

- Number of graduates in Vocational Agriculture at Iowa State University during school year 1964-65, ending August 31, 1965:

17

- Number of students presently enrolled in Vocational Agriculture teacher education program at Iowa State University:

129	Freshmen	- 53
	Sophomores	- 26
	Juniors	- 29
	Seniors	- 21

## SECTION 2

### B U S I N E S S   E D U C A T I O N

#### Operating Programs

The aim of a distributive education program is to train competent workers for employment in that phase of our economic system that has to do with marketing and merchandising of goods and services.

Office occupation programs are maintained in order to train individuals to assume positions in public or private enterprises or organizations which deal with the facilitating functions of an office.

#### Teacher Education and Qualification

Teachers (teacher-coordinators) who instruct in these distributive and office education programs at the high school or post-high school level are graduates of a four-year accredited college or university and are certified in Iowa as a teacher with approval to teach business and office subjects. It is required by the Division of Vocational Education, in accordance with the Iowa State Plan for Vocational Education, that these vocational teacher-coordinators have eight semester hours in professional office or distributive education courses and 3,000 hours of approved practical experience as a paid employee in business or office occupations.

#### Availability of Teachers

Through the efforts of the staff at State College of Iowa and personnel in the State Department of Public Instruction, a sufficient number of qualified distributive and office education teachers have been prepared to instruct in the high school and post-high school programs. Through pre-service and in-service instruction, it has been possible to maintain a supply of teachers to meet demands. In spite of the start of 35 new programs in office education at the beginning of the 1965-66 school year, vocationally prepared teachers with the above mentioned qualifications were available. It is anticipated

that many new distributive and office education programs will be initiated in coming years. Expectations are that teachers will be available if present recruitment practices are continued, and the leadership and funds are available.

#### Progress with Summer Programs

In addition to the 35 students now enrolled in business education at State College of Iowa, nearly 60 employed teachers returned to the campus last summer (1965) to obtain course work which will qualify them as distributive or office education coordinators. Also, last summer an institute for similar instruction was conducted for approximately 20 employed teachers at the University of Iowa. There are plans to offer such an institute again during the summer of 1966.

#### Facts and Figures Concerning Business Education Teacher Education

● Institutions involved in teacher education:

State College of Iowa  
University of Iowa

● Number of faculty members concerned with distributive and office education teacher education:

at State College of Iowa - Three  
at University of Iowa - One

● Federal and state funds disbursed for business education teacher education, 1964-65:

at State College of Iowa - \$13,693.15  
at University of Iowa - \$ 1,000.00

● Number of graduates in business education at State College during the school year 1964-65, ending August 31, 1965:

Distributive Education - 19

● Number of students presently enrolled in business education teacher education at State College of Iowa:

Distributive Education - 21  
Office Education - 14

## SECTION 3

### G U I D A N C E - C O U N S E L I N G

#### Qualification of Counselors

The Iowa State Plan for Vocational Education spells out five requirements that teachers must satisfy before they are qualified as a counselor of vocational guidance, and counseling. These are:

1. Shall be the holder of a valid Iowa teacher's certificate endorsed for teaching at the secondary school level.
2. Shall have completed an approved master's degree program for the preparation of school guidance counselors with emphasis in vocational guidance and counseling, and be recommended for counselor approval by the preparing institution.
3. Shall have had two years of successful teaching experience at the secondary level.
4. A minimum of one year of experience as a wage earner in one or more occupations outside the field of education.
5. Desirable to have had preparation and/or teaching experience in vocational education or practical arts.

#### Expanding Services

Guidance and counseling programs have been expanding in the schools of Iowa at a steady rate. Through these programs, schools have offered services to students in educational, social, and occupational counseling.

#### Factors Influencing Counselor Supply

Growing interest in the provision of guidance services at the elementary and secondary level is affected by a shortage of personnel qualified to serve as counselors. Due to increased enrollments at technical institutes, junior and community colleges and four-year colleges and universities, there will be a greater need for trained personnel in guidance and counseling. It is expected that this demand will continue as area vocational schools and area community colleges develop throughout the state. There will be an acute shortage of counselors unless additional persons complete the counselor

education programs, secure state department approval as a counselor, and are employed in a position where they may function as a full-time counselor.

Facts and Figures Concerning Guidance-Counselor Teacher Education

• Institutions involved in counselor education:

Iowa State University  
State College of Iowa  
University of Iowa  
Drake University  
Loras College

• Number of faculty members concerned:

Iowa State University - Two  
State College of Iowa - Three  
University of Iowa - Four  
Drake University - Two

• Federal and state funds disbursed for counselor education programs in 1964-65:

at Iowa State University - \$6,655.17  
at University of Iowa - \$7,158.15

• Number of graduates in counselor education at reimbursed institutions during the school year 1964-65:

at Iowa State University - 15  
at University of Iowa - 15

• Number of students presently enrolled in counselor education:

at Iowa State University - 69  
at University of Iowa - 18

(Enrollments below are totals from all institutions involved in counselor education)

	Elem.	Sec.	Total
Actual on campus full-time	5	60	65
Estimate of all pursuing program	15	373	388

## SECTION 4

### H O M E   E C O N O M I C S

#### Teacher Preparation

All teachers of vocational home economics at the high school level have completed an approved program for vocational home economics and hold a baccalaureate degree. At the present time, there are no operating programs at the post-high school level.

#### Future Supply

Through the years it has been possible to staff most positions of vocational home economics in the secondary schools with teachers who hold a professional certificate. It is felt that there are unemployed graduates of home economics education programs residing within the state who would be available for service should there be a sudden demand for vocational home economics teachers.

#### Influence of New Programs

There is an emerging area within home economics education that will gain attention in the future. This area is the wage-earning occupations related to home economics such as food service worker, child day-care center worker, clothing maintenance specialist, and hotel and motel housekeeping aide. Increasing numbers of women are employed outside the home. Many employment opportunities call for occupational skill that can be gained through specialized, organized, instruction in the home economics field. Teachers who are to instruct in these occupational areas of home economics will need practical and teaching experience as well as formal education. Under present policy, a person seeking a teaching position in an occupation specialty would be a graduate of an approved home economics teacher education program or would have a major in the area related to the occupation. Additionally, at least one year of work experience is required, and the person should possess personality traits that are desirable characteristics of teachers.



## Impact of Area Schools

As evidence of the coming need for occupational teachers in the vocational home economics field, over 50 per cent of the first eleven area school plans submitted to the State Board of Public Instruction included proposed programs offering instruction in the service areas of food and food handling, cooks and chefs, and nursing aides. Offerings will not necessarily be limited to these areas. Area schools may decide to arrange curriculums which offer broad home economic programs that include occupational training. This will enable graduates to be better prepared when performing the dual role of wage-earner and home manager.

## Facts and Figures Concerning Home Economics Teacher Education

- Institutions involved in teacher education:

Iowa State University  
State College of Iowa

- Number of faculty members concerned with vocational home economics teacher education:

at Iowa State University  
graduate faculty - five  
undergraduate faculty - five  
supervising teachers - six

at State College of Iowa - two

- Federal and state funds disbursed for vocational home economics, 1964-65:

at Iowa State University - \$23,694.09  
at State College of Iowa - \$ 2,000.00

- Number of graduates in vocational home economics during the school year 1964-65:

at Iowa State University - 66  
at State College of Iowa - 16

- Number of students presently enrolled in vocational home economics:

at Iowa State University  
graduate - 29  
undergraduate - 267

at State College of Iowa - 75

## SECTION 5

### HEALTH OCCUPATIONS

#### Program Development

The health occupations area has increased in scope since the first practical nursing program was organized in 1956. During the 1964-65 school year, there were 12 practical nursing programs involving 292 students. Medical assistant programs are now included in the health occupations area. Presently, 405 students participate in 15 health occupation programs operated through boards of education and community colleges in 15 cities.

#### Instructors and Their Training

There are 60 full-time and part-time instructors in the 15 operating programs. In most instances the instructors are registered nurses or have baccalaureate degrees in nursing. They receive limited in-service education-training from two health occupation consultants who serve on a state-wide basis. Because of the geographic spread of the centers with operating programs, the consultants find it difficult to arrange class study, as such, for the practical nursing instructors. Consequently, much of the assistance is arranged on an individual basis.

#### Future Developments

Programs in health occupations are proposed which would prepare dental assistants, x-ray technologists, and medical secretaries. Proposed and present on-going programs may amplify the demand for teachers of health occupations.

#### Facts and Figures Concerning Health Occupations Teacher Education

- Institution involved in teacher education:

University of Iowa

- Number of faculty members concerned with health occupations education:

Two

- Federal and state funds disbursed for health occupations teacher education, 1964-65:

\$8,470.17

- Number of teachers of health occupations in the state:

44 full-time

16 part-time

## SECTION 6

### TRADE and INDUSTRIAL - TECHNICAL

#### Industrial Expansion

Over recent years, the "business climate" in Iowa has experienced a strengthening of industry to the extent that the state is recognized for its industrial products as well as agricultural products. Those interested in the state's development know the meaning behind the phrase - "where factory and farm share prosperity."

Industrial corporations from outside Iowa and businesses developing within the state have a major concern in securing trained workers to staff their new plants and offices. Graduates of the operating trade and technical programs experience no trouble in finding employment in these growing industries.

#### Fields of Employment

Along with the need for trade and technically trained workers, there is a corresponding need for teachers trained to provide instruction. Teachers of trade or technical subjects might be employed to teach trade preparatory, apprentice, or evening extension (supplementary) classes for employed adults in the comprehensive high school. Other teachers might be employed by an area vocational-technical school, a technical institute, or an area community college.

#### Qualification of Teachers

What should be the training and background of a teacher in any of these schools? Those engaged in teacher education and supervision of vocational education would be satisfied if every teacher involved in trade and technical teaching had a college degree and practical experience in the trade being taught. It has been difficult to find teachers who possess these qualifications.

When, of necessity, a teacher is to be employed with less than the above educational or occupational qualifications, it has been recognized that experience, practical know-how, and knowledge of a trade or occupation are the most important criteria to be considered. According to the Iowa State Plan for Vocational Education, trade and industrial education instructional personnel "shall have had at least three years of recent practical experience in the trade they are to teach." The plan has this to say about technical education instructional personnel: "in addition to three years of recent practical experience they shall have satisfactorily completed two years of training in a technical school in areas they propose to teach, or have completed two years in a four-year training program in the service area; and have completed at least 20 semester hours of mathematics and science on a technical school or college level."

#### Craftsmen and Technicians Who Enter Teaching

Discussions among trade and industrial educators have centered on whether it is better to employ a craftsman and prepare him to be a teacher or to employ a person prepared to teach and instruct him in a trade. Research cannot be cited to support either position. Although no hard and fast rule would apply, experience seems to indicate that best results can be expected when individuals strong in trade and know-how are prepared to be teachers.

Since many teachers now employed in the above mentioned schools are craftsmen and technicians who have entered the teaching profession, an effort has been made through recent decades to assist them to develop teaching abilities. They have been instructed in groups and classes, or individually, in techniques of teaching technologies and trades, philosophy, course organization, evaluation, and laboratory planning. This instruction can be gained through attendance at colleges and universities as full-time students, attendance at institutes, workshops, and seminars, or through individual and group study.

The State of Iowa has one teacher educator of trade and industrial, and

technical education who is on the Iowa State University staff. His work is financially supported by the State Department of Public Instruction and Iowa State University. During the school year 1964-65, this individual traveled throughout the state and conducted 48 group meetings, involving 392 instructor contracts and 455 individual conferences. His concentrated effort was to assist the 58 new trade and technical teachers. This teacher educator also taught courses on campus during the summer which had trade and technical teacher enrollees.

#### Trade Experience

The above paragraphs have noted the attention given to providing instruction to craftsmen in an effort to aid them to become better teachers. Information should be reported about the graduates of four- or five-year teacher education programs who are striving to increase their knowledge and skill in a trade. Such teachers might have had employment in a trade prior to enrollment in their college program; others seek to stay abreast of industrial development and changes by acquiring trade experience during summer employment. Improvement of skill through employment in industry is essential to supplement experiences gained in a college or university laboratory.

#### Demand for Teachers and Sources of Supply

With the development of area schools, a sharp increase in the need for trade and technical teachers is expected. Proposed curriculums from some of these area schools suggest, but are not limited to, such subject offerings as: industrial and electronic technology, mechanical technology, air conditioning and refrigeration, data process computer maintenance, auto mechanics, machine shop, instrumentation technology, welding, and heavy equipment operation. Success of these schools and their programs will depend upon the employment of competent industrial teachers ~~---~~ trade or technically qualified.

All possible sources of candidates for trade and technical teachers are being considered. Following are some of the sources: graduates from technical

institutes, promising high school graduates, present high school industrial arts teachers, retired and discharged military service personnel, craftsmen and other industrial employees.

#### Plans to Provide Teachers

Forward looking projects to aid in providing these needed teachers are under way.

At the present time, Iowa State University is planning to arrange a summer study program for engineers who desire to obtain the professional education skills needed to enter teaching. Also, this institution has been in contact with the building trade unions of the American Federation of Labor-Congress of Industrial Organizations to ascertain if any competent, able, craftsmen desire to be trained as teachers for future employment in the various trade and technical programs.

The Industrial Arts Department of State College of Iowa has a proposal under consideration which will attempt to upgrade and improve the present technical teachers in the State and implement ways to help educate future technical teachers entering this professional field.

#### Facts and Figures Concerning Trade and Industrial, and Technical Teacher Education

● Institution involved in teacher training:

Iowa State University

● Number of faculty members concerned with trade and industrial teacher training at Iowa State University:

One

● Federal and state funds disbursed for trade and industrial training at Iowa State University, 1964-65:

\$7,435.67

## C O N C L U S I O N

The State of Iowa has reason to be concerned about the growing demand for, and inadequate supply of vocational and technical teachers.

Most administrators, personnel officers, and teacher educators realize that this is not a new development or a unique situation. They understand that the present teacher shortage has expanded to include the vocational-technical area. Administrators have difficulty in offering complete educational programs when there is a question about the availability of teachers for various subjects. Personnel directors are traveling to more campuses and conducting more interviews to secure teachers to fill vacancies. Teacher educators are sponsoring conferences and visitations for prospective teachers to explain their institutional offerings in the field of vocational-technical education.

As reviewed in the sections of this report, there are expanding vocational, technical, and business programs at the high school and post-high school levels. With the development of more vocational-technical programs in the schools of Iowa, the teacher shortage comes at a time when our state can least afford it. Development of the area schools places Iowa at the threshold of one of the greatest educational opportunities ever encountered. Educationally and economically we cannot afford to overlook the teacher shortage problem.

Millions and billions of dollars have been appropriated for, but not limited to, student loans, library and facility construction, research grants, educational television and adult education. Our state disbursed Federal and state funds which totaled \$80,106.40 in 1964-65 for vocational-technical teacher education. If greater funds were spent for the training of vocational-technical teachers, would it result in greater numbers of well-qualified teachers?



Other questions can be posed which bear on the future supply of these teachers:

Should a statewide coordinated effort be arranged to provide for the pre-service and in-service education of vocational teachers?

Should federal and state financial support be continued so that these teachers can be assured of tenure in the profession?

What will be the trend in salary schedules and welfare benefits for vocational teachers?

What certification and approval procedures should be observed in providing vocational teachers, who have less than a bachelor's degree, with a teaching credential?

As stated in the introduction to this report, we cannot be certain that educational services and opportunities will be extended to more people by merely centering attention on organization, curriculum, buildings, and budgets. It is mandatory that greater attention be given to vocational-technical teacher education.

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