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PROGRAMS AT IOWA STATE UNIVERSITY, 1869-1968.

Iowa State University, Ph.D., 1975
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A history of undergraduate teacher education
programs at Iowa State University
1869--1968

by

L. David Weller, Jr.

A Dissertation Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
DOCTOR OF PHILOSOPHY

Department: Professional Studies
Major: Education (Educational Administration)

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For the Graduate College

Iowa State University
Ames, Iowa

1975

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CHAPTER I
INTRODUCTION

Since its doors were formally opened to students in 1869, Iowa State University¹ has been engaged in the training of teachers. Although the preparatory courses of the early years equipped students with the academic skills necessary for teaching in the rural schools, the earliest form of distinct teacher preparation consisted of a series of normal lectures offered during the second half of the senior year. Professional courses, however, were not instituted until more than three decades later in 1901. Domestic art and domestic science were offered in the Department of Domestic Economy, and educational psychology was offered in the Department of Philosophy. For purposes of this study, the phrase "teacher education programs" embraces not only the professional teacher education courses of the years following 1901 but also the earlier provisions for teacher preparation.

Since 1901 the University has developed and administered an expanding program of teacher education. By 1968 the program encompassed twenty undergraduate areas of specialization as well as nine areas of graduate study. Approximately

¹The terms Iowa Agricultural College, Iowa State College, Iowa State University, Iowa State, the College and the University will be used interchangeably throughout this paper.

twenty (20) percent of those students who received a baccalaureate degree were recommended for teacher certification. A century of growth has seen teacher education develop from rather limited beginnings into a program of numerous and diversified curricula which represents one of the most important and viable strengths of Iowa State University's total educational offerings.

Although this investigation focuses on the history of the development of undergraduate teacher education programs at Iowa State University, it is appropriate to include some discussion of selected forces within the framework of United States history which affected the course of education, general trends in teacher preparation, and the status of education and teacher preparation in Iowa. The intention of the author is not only to provide a background for the development of education in America but to relate trends in each of these areas to the growth of teacher education programs at Iowa State University throughout its history. As Freeman Butts and Lawrence Cremin assert,

the shape of education in any time and place is largely a function of the interaction of the institutionalized forms of behaving solidified or leavened by the dominant ideas of the people who control the educative process.¹

¹R. Freeman Butts and Lawrence A. Cremin, *A History of Education in American Culture* (New York: Holt, Rinehart and Winston, 1953), p. 43.

In other words, Butts and Cremin are saying that the patterns of American education can not be fully understood without a consideration of America's cultural traditions and the political, social, economic and religious factors which motivated her people. This thesis is fully supported by Kerlinger, who states that the tendency among modern educational historians is "to relate ideas to social and institutional structures" ¹ Such a frame of reference provides a fuller understanding of the founding of the University as Iowa Agricultural College and its subsequent incorporation as a land-grant institution. It also provides us with a valuable reference point and basis of comparison for a specific discussion of each period in the growth and development of the University and its teacher education programs.

Justification for the Study

Histories of Iowa State University and several of its departments have already been written. None of these accounts, however, relates directly to the development of undergraduate teacher education programs. By 1968 approximately twenty (20) percent of Iowa State University students who received a four-year degree were recommended for teacher certification. Since

¹Fred W. Kerlinger, ed., Review of Research in Education (Ithasca, Illinois: F. E. Peacock Publishers, Inc., 1973) pp. 246-247.

teacher education comprises such an important component of the University program, a definite need exists to document its development and expansion.

Furthermore, it is particularly appropriate at this point in time to examine the growth and development of teacher education, for it seems quite likely that the teacher education program may have reached its point of maximum expansion. The emphasis of the 1960s on zero population growth or replacement level population growth is already reflected in declining elementary school enrollments and a corresponding surplus of teachers. The mounting concern with monetary considerations such as inflation, property taxes, and a decrease in federal funding is reflected in budget cuts which have necessitated reduction in teaching staffs or at least in maintaining the status quo. In addition, recent economic and population changes that have resulted in an educational dollar crunch and increased unemployment may have a definite influence in reducing teacher turnover. Lack of certainty regarding the future is already causing some teachers to remain in their current positions rather than seek advanced degrees and join the jobless upon graduation. The manpower situation has changed drastically in a very short time. As late as 1970 David Selden, writing for Phi Delta Kappan, discussed the teacher shortage and yet, according to a recent NEA research report, the teacher surplus is projected to total 412,000 by

1979 if production continues to increase at the current rate.¹ One can reasonably state that the survival of viable teacher education programs depends on the extent to which these programs are able to change and adjust in response to the demands of current and future realities.

The story of teacher education at Iowa State from 1869 to 1968 however, was essentially one of growth and expansion. Accordingly, this study was directed toward answering the following questions. Was teacher education a major consideration in the establishment of land-grant institutions? Was teacher education an important impetus in the founding of Iowa Agricultural College? How and when did teacher preparation at Iowa State actually begin? Who were the early leaders of the teacher preparation program at Iowa State, and what influence did they have on the College? Which divisions and colleges of the university provided teacher education programs prior to the founding of the College of Education? What teacher education programs were introduced in the different departments and when were they established? After the establishment of professional teacher education courses, which men and women were most influential in the development of teacher education at Iowa State? What were the major factors

¹Herold G. Regier, *Too Many Teachers: Fact or Fiction?* (Bloomington: Indiana, Phi Delta Kappa Educational Foundation, 1972), p. 7.

that led to the establishment of a College of Education?
Throughout its history, what forces within and outside the
university resisted and promoted the teacher education program?

Statement of the Problem

The purpose of this study is to provide a history of teacher education programs at Iowa State University, Ames, Iowa from its inception in 1869 until 1968. The problem is to trace the growth and development of the various teacher education programs and to bring these disparate programs together into a single, comprehensive study of this vital facet within the University's total educational program. This study reveals how Iowa State has provided teacher preparation for its students for a century, and it furnishes a background for understanding the strength and diversity of current programs.

Design of the Study

The preparation of this dissertation involved a historical investigation of existing sources and data relevant to the development of teacher education programs at Iowa State University. As Homer Hockett notes, the historian's task "is to gather a body of ascertained facts which, properly presented, will clarify our understanding of the past and its significance

for the present."¹ By utilizing primarily the written records of past or current events, the historian attempts to test the truthfulness of the reports of observations made by others. The historical method involves the collection, criticism, and presentation of pertinent data. The final step is not a mere listing of information but a presentation of facts, interpretations, and conclusions in readable form.

The critical examination of statements necessitates the two separate processes of external and internal criticism. External criticism seeks all possible information regarding the significance of a document's origin or the authenticity of the source. Once this has been established, the historian's focus shifts to statements within the document as he seeks to understand what the statements say and mean and attempts to determine their truthfulness and reliability. The historian's continuing quest is a dual one: (1) to determine the facts; and (2) to attempt to tell the truth through the facts at his or her disposal.

The compilation of data necessitated reference to primary and secondary sources and utilization of the processes of external and internal criticism. Most of the pertinent data

¹Homer C. Hockett, *The Critical Method in Historical Research and Writing* (New York: The Macmillan Company, 1955), p. 64.

was recorded on 4 x 6 cards. Where possible materials were checked against one another for corroboration. In addition and where appropriate, interviews were conducted to supplement and verify archival sources. Based on a series of unstructured questions, interviews were designed to gain additional details or confirming information regarding a particular phase or phases of teacher education at Iowa State with which the interviewee was most familiar.

Preliminary research commenced in July, 1972, and culminated in November, 1972, with the preparation of a bibliographical essay. This work was designed to answer questions regarding the extent of information available and its location as well as to provide a general overview of the proposed topic.

Intensive research began in August, 1973, after determining into what general periods the material should be divided. While common historical divisions served as a guide, the selection of periods for this investigation was primarily based on the contribution of each period to a distinct phase in the development of the total undergraduate teacher preparation program at Iowa State. The periods were divided as follows: The Pre-Professional Period, 1869-1900; the Early Professional Years, 1900-1917; The Era of Vocational Education, 1917-1941; and, From Vocational Education to Education, 1941-1968. Research proceeded, in general, on a period by period

basis progressing within each period from consideration of the national educational scene and educational developments in Iowa to concentration on the establishment and growth of undergraduate teacher education work at Iowa State.

The most helpful secondary source materials on educational developments at the national level were: A History of Education in America by R. Freeman Butts and Lawrence A. Cremin; A History of the Problems of Education by John S. Brubacher; A History of American Education by Harry G. Good and James D. Teller; Education in the United States by Edgar W. Knight; An Educational History of the American People by Adolphe E. Meyer; and Formative Ideas in American Education: From the Colonial Period to the Present by V. T. Thayer.

This investigation continued with a review of primary and secondary sources dealing with the educational history of Iowa. The most helpful of these sources were: the Iowa Department of Public Instruction Reports, 1894-1969; the Iowa Educational Directory, 1894-1968; and Data on Iowa Schools, 1962-1969. In addition, three multi-volume works contained valuable information for the years preceding World War I: the History of Iowa by Benjamin F. Gue; the History of Education in Iowa by Clarence Ray Aurner; and, Messages and Proclamations of the Governors of Iowa, compiled and edited by Benjamin F. Shambaugh. The January, 1956, edition of The Palimpsest was devoted to the history of the consolidated school movement in

Iowa. Another valuable reference was Irving H. Hart's, Milestones, a history of the Iowa State Education Association.

Several secondary sources dealing with land-grant education and the history of Iowa State College were read to obtain a general overview in these areas. Colleges For Our Land and Time by Edward Eddy, Jr. and Land-Grant Colleges and Universities, 1862-1962 were the most valuable sources on the history of land-grant education. How the Land-Grant Colleges Are Preparing Special Teachers of Agriculture by Ashley Van Storm was obtained on an inter-library loan from George Peabody College for Teachers. It provided valuable insights as to Iowa State's position in relation to other land-grant institutions in the development of agricultural education before 1920.

The most valuable secondary sources on the history of Iowa State were A History of the Iowa State College of Agriculture and the Mechanic Arts and The Land-Grant Idea at Iowa State College both by Earle D. Ross; and, History and Reminiscences of I.A.C. by the Class of 1897. A Century of Home Economics at Iowa State University by Ercel S. Eppright and Elizabeth S. Ferguson contained important data on the growth of Iowa State University and was particularly helpful in documenting teacher education developments within the field of home economics.

The greater part of the last two years of research, however, was devoted solely to the history of undergraduate teacher education work at Iowa State. Robert McNee Hamlin, "A Case Study of Teacher Training in a Separate Land-Grant College" (doctoral dissertation, University of Chicago, 1931) included some excellent material on the early history of teacher preparation at Iowa State College. This work, however, was limited almost exclusively to the development of vocational education in Iowa and at Iowa State and included a study of the careers of Iowa State graduates in vocational education and home economics education between 1913 and 1917.

Research within each period commenced with a detailed examination of the Biennial Reports of Iowa State College and Iowa State University, 1856-1969 and the Catalogues of Iowa State College and Iowa State University, 1886-1969. Additional information on teacher education was uncovered through examination of the Iowa State Board of Education Biennial Reports, 1910-1955; the Minutes of the Iowa State Board of Education, 1910-1955; and the Minutes of the Meetings of the Iowa State Board of Regents, 1955-1969.

Two additional studies were particularly valuable in considering the matter of duplication of work among the three institutions of higher education in Iowa: State Higher Educational Institutions of Iowa by Samuel P. Capen et al. and Report of a Survey of the Institutions of Higher Learning

in the State of Iowa by George D. Strayer, Director.

Extensive use of the many different files located in the special collections room of the Iowa State University Library produced much valuable information and almost all of the photographs included in this study. Particularly rich sources of information were the papers of selected Iowa State presidents, deans of divisions, and individual departmental files. Unfortunately some of the personal papers of Charles F. Curtiss, which could have proved extremely valuable to this investigation, were not available as they had been destroyed at the time of his death in 1946. Examination of the Iowa State Faculty Minutes and the Faculty Newsletter provided additional insights on teacher education. Relevant data was also found through examination of student publications: The College Clipper, June 18, 1890; the Aurora, 1873-1891; the Iowa Agricultural College Student, 1897-1947; the Iowa State Daily, 1947-1969, and a cursory examination of the school yearbook, the Bomb, 1894-1968.

Statements and papers relevant to preparations for the North Central Association accreditation visit in 1966, and the establishment of the College of Education in 1968, were furnished to the author by the College of Education.

Finally, during the fall of 1974 and the spring of 1975, interviews were conducted with three former Iowa State professors, who are retired and living in Ames, Iowa, as well as

with two current members of the administration in the College of Education. The interviews were based on an unstructured schedule designed to elicit two types of information, details or corroborating data about a program or programs of teacher education with which the interviewee was most familiar and general background on the history of undergraduate teacher education at Iowa State.

A chronological approach was used throughout the study with single chapters devoted to specific time periods. The introductory chapter discusses the value of setting the study within an historical framework which includes summary discussions of selected national patterns related to education, major educational developments, general trends in teacher education, and the status of education and teacher education in Iowa. It also includes the justification for the study, the statement of the problem, and the design of the study.

Chapter II is entitled "Historical Foundations" and covers briefly the period from 1600 to 1865. It contains a short sketch of education in colonial America which provided a background for the emerging forces of democracy which so profoundly affected education in pre-Civil War America. Further, it contains references to the development of the American ideal of a ladder system of public education, the federal government and education, early attempts at teacher preparation, educational developments in Iowa, 1830-1965, and,

also, the founding of Iowa State College and its subsequent incorporation as a land-grant institution under the Land Grant Act of 1862.

Chapter III encompasses the period from 1865 to 1900 and includes an overview of pertinent national developments in education and teacher preparation during the early years of the industrial and scientific age. Educational developments in Iowa, with particular emphasis on the status and development of teacher education, are also covered. Discussion of the teacher preparation program at Iowa State during the pre-professional period follows. Although no professional teacher preparation courses were offered during this time, teacher education opportunities did exist and numerous students and graduates engaged in teaching.

Chapter IV covers the later years of the industrial and scientific age from 1900 to 1917. Reference is made to national developments in education as well as to the progress of education in Iowa. The primary emphasis of this chapter is on the early development of professional teacher education programs at Iowa State and the establishment of the first department of education in 1911.

Chapter V is devoted to a consideration of the years from 1917 to 1941. The passage of the Smith-Hughes Act in 1917 placed national emphasis on the development of programs in agriculture, home economics, and manual training in the

schools. This, in combination with vocational legislation in Iowa, created an increased demand for qualified vocational teachers. The influence of both national and state legislation on the development of teacher education at Iowa State College during the 1920s and the 1930s was important in making this period different from preceding periods.

Chapter VI, entitled "Education in Mid-Century America," considers the years from 1941 to 1968. Increased federal participation in the education of Americans constituted the major development on the national scene. In Iowa, federal legislation and new state legislation, increasing enrollments, diversification of programs, particularly at the secondary level, and efforts to upgrade teacher certification were primary forces affecting educational developments. Federal and state legislation, once again, had a direct influence on the further expansion of teacher education at Iowa State. While vocational education continued to expand, the major thrust of expansion during these years was in nonvocational fields. Early administrative efforts to coordinate teacher education programs are also discussed as is the growing recognition of the need to adopt a centralized administrative structure, which would provide a higher degree of coordination and communication among all teacher education programs and personnel.

Chapter VII, the Epilogue, considers the establishment of the College of Education at Iowa State University on September 1, 1968, and briefly outlines its basic organizational structure and components. Finally, Chapter VIII is devoted to a brief summary of "A History of Undergraduate Teacher Education Programs at Iowa State University from 1869 to 1968."

CHAPTER II
HISTORICAL FOUNDATIONS

The National Scene

Through the American Revolution, or from 1600 to 1779, education in America remained essentially in the tradition of its European models. Ideas and patterns were emerging, however, which augured profound changes for educational theory and practice. Significant changes were occurring in government, religion, society, and the economy. Increased attention was also being paid to the intellectual and scientific trends of the Enlightenment which carried appeals to human reason, natural rights, the scientific method, individual freedom, and humanitarian and democratic principles.

The years from 1779 to 1865 witnessed continued growth toward a distinctly "American" way of life. This period saw a waning of the dominant influence of religion, expansion westward and the development of nationalism, an expanding role for the federal government, the extension of political and economic democracy, a rising industrial and commercial society, and the development of laissez-faire capitalism. These newer patterns in American life triggered the demand for a more universal education for the masses and for an educational structure which would more adequately meet the demands of a changing American society.

Thomas Jefferson, who was elected to the Presidency in 1800, became the symbol of such familiar doctrines as the extension of political and economic democracy. The theory that education is a proper function of government was championed by Jefferson, whose faith in the general public and firm belief in the importance of an enlightened citizenry made him a vigorous supporter of public school education. A "Bill for the More General Diffusion of Knowledge," which he authored and introduced to the Virginia legislature in 1779, became the first definite American plan for a state school system. It also provided the framework of an American public educational ladder system that is with us today--the common or elementary school, the high school, and the state university. Jefferson sought, through his proposal, a means to educate his fellow countrymen and to prepare them for a new era--the industrial and scientific age--which he believed was soon to arrive.

During the 1830s and 1840s the great democratic movement of which Andrew Jackson became the symbol expressed itself in demands for reforms of all kinds. "Jacksonian Democracy" espoused universal education as the key to opportunities for individuals to create a better society through their own efforts. The three decades preceding the Civil War were dominated by a democratic upheaval that profoundly affected intellectual life. The auspicious educational atmosphere of

the times is clearly represented in the following quotation.

Let us diffuse knowledge throughout the length and breadth of this great country; multiply the means of information, - send the schoolmaster into every hovel, - dot every hill with the schoolhouse and college, - let the press, without intermission, day and night, pour forth its steady streams of light, - foster science and the Arts, - let the civilizing and Godlike influences of machinery uninterruptedly extend. Then will the future of our country open, boundless and great, beyond all example, beyond all compare, and countless ages bless its mission and acknowledge its glorious dominion.¹

The federal government and education

The use of land for the stimulus of education had begun in colonial times, but the action generally cited as setting a precedent for the interest of the federal government in education is the Land Ordinance of 1785. Principally authored by Thomas Jefferson and concerned with the survey and disposal of colonial lands, this legislation specified that "there shall be reserved the lot, [section], number 16 in each township for the maintenance of public schools in said township."² The Northwest Ordinance of 1787 supported the legislation of 1785 and became the cornerstone of the policy of the federal government toward education through the following clause:

¹De Bow's Review, 1854, cited by Merle Curti, Growth of American Thought, 3rd ed. (New York: Harper and Row, 1964), p. 335.

²Stephen J. Knezevich, Administration of Public Education, 2nd ed. (New York: Harper and Row, 1967), p. 177.

"Religion, morality, and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be forever encouraged."¹

According to the United State Constitution education, not being specifically delegated to the federal government, remained the responsibility of the states. But clearly a partnership between the federal government and education had already been established and some provisions of the Constitution, notably the "general welfare" clause, paved the way for a great variety of future federal programs.

The Morrill Act of 1862

Generally considered the second major action involving the federal government and education, the Morrill Act of 1862 provided federal grants of land to public institutions of higher learning. Sponsored by Justin Smith Morrill of Vermont, this land-grant act established the great system of land-grant colleges and universities developed on a cooperative basis between the federal government and the several states. Responsive to the ideas widely current and focused on the democratization of higher learning in its disregard for all distinctions of race, creed and sex, the Morrill Act signaled the advent of

¹Edward D. Eddy, Jr., *Colleges for Our Land and Time*, 1st ed. (New York: Harper and Brothers, 1956), p. 21.

. . . a new philosophy in education, national in scope, progressive in outlook, and peculiarly applicable to the important new trends in American civilization which were taking form and substance by the middle of the nineteenth century.¹

The Morrill Act provided for public land or land scrip to each individual state in an amount equivalent to thirty thousand acres for each senator and representative to Congress in accordance with the census of 1860. Monies from the sale of such lands were to be invested in United States bonds, state bonds, or other safe bonds and the capital was to remain forever unimpaired. As specified in Section 4 of the act, the interest from these monies was to be inviolably appropriated

. . . to the endowment, support and maintenance, of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the state may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.²

This "new" education of the land-grant schools combined the traditional setting of classroom learning experiences with technical and practical training to give the student a broad

¹Ross, A History of Iowa State College, p. v.

²Henry S. Brunner, Land-Grant Colleges and Universities, 1862-1962 (Washington: U.S. Government Printing Office, 1962), p. 55.

educational program.

To suggest that the Morrill Act of 1862 was designed to establish institutions of higher education exclusively for the study of agriculture and the mechanic arts, however, would be to misread entirely the principles of the bill as introduced by Senator Morrill. The elastic phraseology provided, without so specifying, for the development of numerous and diverse curricula required by a young and growing nation. Speaking at the Massachusetts Agricultural College in 1887, twenty-five years after the passage of the act, Morrill again set forth his views on the general purpose.

It would be a mistake to suppose it was intended that every student should become either a farmer or a mechanic when the design comprehended not only instruction for those who may hold a plow or follow a trade, but such instruction as any person might need - with 'the world all before them where to choose' - and without the exclusion of those who might prefer to adhere to the classics.¹

Growth of an American Ladder System of Education

The transformation from parent-dominated, private education of colonial times to a public system of education was in accordance not only with the democratizing thrust of the early nineteenth century, but it was also in harmony with the

¹Brunner, p. 2.

growth of nationalism, a rising middle class, and a capitalistic economy. The democratic principle of equality coupled with a belief in the necessity of an educated citizenry to sustain the republic constituted primary forces behind the movement for free schools.¹ Throughout America by 1865, although developments were uneven and the South was a notable exception, "the principle of public support of education had taken root and the American people were definitely committed to their support."²

Elementary education

Until the Civil War, the formal education of the common school remained essentially secondary and supplementary to the education of the farm. Generally speaking, children began to attend school between the ages of four and six, and could remain for five to eight or nine years, depending on the region. The great majority of the one-room elementary schools of this period were humble dwellings with humble educational offerings. Knight offers the following description as typical of nearly all pre-Civil War elementary schools.

¹Horace Mann, of course, was a primary figure in the development of a state school system. Through public meetings, teachers institutes, reports to the legislature and his Common School Journal, Mann's influence reached beyond the borders of his home state, Massachusetts, and did much to assure the successful development of public education.

²V. T. Thayer, Formative Ideas in American Education (New York: Dodd, Mead and Company, Inc., 1965), p. 86.

The surroundings were bleak and desolate, loose, squat stone walls enclosed the fields close by, and briars and pokeweed flourished in the gravelly soil. The schoolhouse was of the rudest construction. The fireplace was six feet wide and four feet deep, and the chimney flue was 'so ample and so perpendicular that the rain, sleet, and snow fell directly to the hearth. In winter the battle for life with green fizzling fuel, which was brought in lengths and cut up by the scholars, was a stern one.' Often the fuel, 'gushing with sap as it was, chanced to let the fire go out, and as there was no living without the fire, the school was dismissed,' to the joy of the scholars. The children were all seated on benches made of slabs or 'outsides,' which were supported by four straddling wooden legs set into augur holes.¹

The program offered to the children was described by Butts and Cremin.

The typical one-room district school was usually attended by a variety of age groups, running all the way from children of four or five to adolescents in their teens. Needless to say, the discipline problem was often critical, and resort to stern methods of punishment was quite in keeping with the conception of the child as a sinful being. . . . The aim of course after course was the digestion of knowledge embodied in a textbook, and all too often meaning and practical application was subordinated to, if not displaced by, simple memorizing The early district schoolroom was most often a picture of a teacher seated at a central desk with one child after another approaching, reciting from text or memory, being rewarded with a smile or a blow depending on the effectiveness of the recitation, and returning to his seat.²

¹Edgar W. Knight, *Education in the United States*, New ed. (Boston: Ginn and Company, 1934), p. 216.

²Butts and Cremin, pp. 274-275.

During the first half of the nineteenth century the monitorial or Lancasterian system of instruction also made its appearance. Under this system, the teacher taught the lesson to a group of older and brighter students. Each of these students, or monitors, then taught the lesson to a group of younger students. In this way, the teacher was able to handle groups of students in excess of one hundred as opposed to the usual two dozen or so.

Secondary education

With respect to education beyond the common school, the typical Latin grammar school of the colonial period, which catered to children of wealthy parents and stressed Latin and other such liberal arts courses, was challenged by a new form--the academy--which represented the most characteristic demand for secondary education in America between 1779 and 1865. Benjamin Franklin, in his proposals for an academy in Philadelphia in 1749, had first envisioned the values of a practical and vocational education. Although in advance of the times and, therefore, initially unsuccessful, Franklin's ideas gained stature following the Revolutionary War. Private academies were designed "to meet the need for newer commercial and scientific skills demanded by the changing American economy,"¹ and they were increasingly established to serve as

¹Thayer, p. 206.

a transition between the Latin grammar school and the American high school. Offering an expanded curriculum and admission to girls, the academy also became a popular agency for teacher preparation for the common schools.

By 1820 demands for free secondary schools appeared in New England, the Midwest and the South, and the first public high school was established in Boston in 1821.¹ The high school emerged as an attempt to provide an education equivalent to that offered by the academy but at public expense to all who qualified. While prospective students could enter the Latin school at nine or ten, candidates for the new English high school² had to be twelve years of age.

Higher education

The college, too, was touched by the democratic currents of the times. Spurred on by denominational rivalry, the number of institutions increased greatly and opportunities for a college education were extended to many more boys. In 1837 Oberlin became the first institution to admit girls. In addition, demands for free, public universities representing the culmination of the educational ladder continued.

¹John S. Brubacher, *A History of the Problems of Education*, 2nd ed. (New York: McGraw-Hill Book Company, 1966), p. 409.

²The program of the new English high school in Boston, which was typical of English courses in most high schools before the Civil War, is described in Appendix A.

The three quarters of a century preceding the Civil War had witnessed remarkable developments in American education. The common school became an integral part of the American scene, the high school was already becoming favored as the people's choice over the academy for a secondary school, and state universities were being opened to qualified high school graduates. Although the early tendency had been to include only white children, a much broader interpretation was gaining favor. By the close of the Civil War, most northern states were providing unitary systems of public schools, while southern states were developing separate, parallel systems of public schools for blacks and whites. Within this young, surging democratic republic there had arisen a dream--an American dream--"to provide an equality of opportunity for all pupils to climb an educational ladder rung on rung."¹

Teacher Preparation

Although it is true that the practice of educating teachers began as early as the eighteenth century in America, the examples of teacher preparation are only isolated ones. As Meyer notes,

¹Harry G. Good and James D. Teller, *A History of American Education*, 3rd ed. (New York: The Macmillan Company, 1973), p. 76.

The bald fact is that before any movement for teacher training could become an actuality, education itself had to be set firmly on its feet. Hence, until the nineteenth century, when certain states, headed by Massachusetts, shook off their educational torpor to begin the work of creating the common school, the effective training of the schoolteachers remained little more than a mirage.¹

The emphasis of Jacksonian Democracy on the feeling of equality among men gave birth to the belief that any man had the necessary qualifications to fill any public office. This idea was carried over to the community's view of the teacher; namely, the notion that anyone could teach school who had a mastery of the basics of the common branches of knowledge. During the first half of the nineteenth century, however, educational literature did reflect an increasing interest in the matter of other desirable qualifications in a teacher. The qualities mentioned most frequently were a Christian character, a sense of moral obligation, and faith in the republic.²

Demands for better teachers reflected not only an increased concern about the question of qualifications, but also generated a number of diverse attempts to provide more adequate teacher preparation. "Educate men for the business

¹Adolphe E. Meyer, *An Educational History of the American People*, 2nd ed. (New York: McGraw-Hill Book Company, 1967), pp. 375-376.

²Butts and Cremin, pp. 228-229.

of teaching, employ them, and pay them when educated,"¹ argued Samuel R. Hall, who in 1823 opened in Vermont one of the first private secondary schools for teachers in the United States. Following the lead of Hall, other private normal schools were founded prior to the Civil War.

The tremendous growth in common schools during this period necessitated additional facilities besides private ones for teacher preparation. One of the earliest and most active proponents of public teacher education was James G. Carter. This Massachusetts educator's continual agitation led to the establishment, in 1839, of the first recorded state normal school² at Lexington, Massachusetts. The course of study was one year in length and included:

. . . composition, rhetoric, logic, drawing, algebra, geometry, bookkeeping, navigation, surveying, statistics, the constitution and history of Massachusetts and the United States, physiology and hygiene, mental philosophy, music, natural philosophy, the principles of piety and morality common to all sects of Christians, and the science and art of teaching with reference to all the above named subjects.³

¹Knight, pp. 309-310.

²The term normal school originated in France, was popularized by New England educational reformers about 1835 and spread to other parts of the United States. Prior to 1900 the term referred to an institution, usually a secondary school, for the education of teachers. After 1900 normal schools gradually became higher institutions. Carter V. Good, ed. *Dictionary of Education*, 3rd ed. (New York: McGraw-Hill Book Company, 1973), p. 388.

³Knight, pp. 319-320.

Following the lead of Massachusetts, other states began to establish state normal schools, but the movement as a whole progressed slowly until after the Civil War.

Two additional educational movements of this period deserve to be mentioned--teachers institutes and lyceums. Teachers institutes first appeared in Connecticut in 1839 under the leadership of Henry Barnard and remained popular into the twentieth century as supplements to the regular normal school program. Usually lasting from a few weeks to a month or more, they were designed as short, but intensive, periods of training which were offered to equip a teacher with the minimum skills of his profession.

Intellectual awakening was also evident in the growth of the American Lyceum movement. An outgrowth of democratic and spontaneous influences, the movement originated in Millbury, Massachusetts in 1826 through the work of Josiah Holbrook, and five years later it became nationally organized.

The lyceum appeared in almost every state; as early as 1835 there were, in addition to the national organization, fifteen or sixteen state organizations, more than a hundred county organizations, and three thousand town and village organizations throughout the country.¹

The lyceums were open to all and were dedicated to the advancement of education, particularly common schools, the

¹Ibid., p. 207.

spread of knowledge, and the promotion of other projects for social betterment. To this end, the lyceums sponsored lectures by prominent men of the times, promoted public discussions and forums, and offered reading materials on numerous social and scientific topics. Lyceums were the forerunners of the university extension programs and professional teacher associations of later years.

Educational Beginnings
in Iowa, 1830 - 1865

Establishment of schools

The educational history of Iowa during the territorial period reflects early concern with both the establishment of a school system and the preparation of teachers. Historians agree that there were both schools and teachers in Iowa even before it was organized into a territory in 1830. In 1838 Iowa's first territorial Governor, Robert Lucas, recommended legislation which called for the establishment of a system of common schools. The territorial legislature subsequently passed general school laws in 1839 and in 1840 which established the first Iowa public schools. Also in 1839, the same year that the first public institution for the training of teachers was established in Lexington, Massachusetts, "a citizen of Burlington, Iowa, recommended the establishment of an institution for the training of teachers at the Capital of

the Territory."¹ A further indication of Iowa's early concern for sound education was the 1840 territorial statute which "required that all persons proposing to teach primary schools must be examined with respect to their moral character, learning and ability to teach school."² These two illustrations reflect proposals which were in advance of actual needs, for prior to 1846 Iowa had no definite free school system. The historian Benjamin Gue rightly asserts, however, that the lack of a common school system was "owing to the rigid economy necessary in the pioneer period, leaving no money for school taxes, rather than to indifference or willful neglect of the people."³ Gue's view is supported by Theodore S. Parvin who had come to Iowa in 1838 as one of the secretaries to Governor Lucas. Parvin recalled a conversation between himself and Lucas in which the Governor explained why he had been so forceful in urging the matter of education upon the legislature.

¹Clarence Ray Aurner, *History of Education in Iowa*, 5 vols. (Iowa City: The State Historical Society, 1920), 1: 285.

²Ibid.

³Benjamin F. Gue, *History of Iowa*, 4 vols. (New York: Century History Company, 1903), 3: 263.

We are building for the future. Our population is to come from the older states east of us, where the common school system is in force, and we must let them know that we are interested in the subject of education and have made provision for their children when they locate among us, and this reference to the subject and the legislative action that may be had thereon will serve to advertise us before the world and place us in a proper position upon this important subject.¹

The year 1846 marks the adoption of a constitution and the admission of Iowa into the Union. Although the first state constitution required the general assembly to provide for a system of common schools for "white" persons, the early school laws did not establish a free public school system. In 1848 the Superintendent of Public Instruction Thomas H. Benton, Jr. not only called for a property tax for public education, but he also suggested the desirability of higher branches being introduced into the common schools and placed in separate departments.² It is generally agreed that Benton's latter suggestion was directed toward the preparation of teachers.

The years from approximately 1855 to 1865 in Iowa witnessed the establishment of academies, the development of

¹Irving H. Hart, Milestones. (Des Moines: The Iowa State Education Association, 1954), p. 2.

²Aurner, 2: 16-17.

a free public school system¹ and definite plans for teacher preparation. Pioneers arriving in the new lands primarily from New England and the Middle Atlantic states brought firm convictions with regard to the value of education for all. In Iowa the foundations had been laid, and the time was right for the development of an educational system.

Life was being lived much the same as in the past; but into the lump of this daily life a new leaven had been injected - the leaven of the ideal that an educated citizenry was essential to the success of the still new American experiment in "government of the people, by the people, and for the people." And there were already some who saw that the common schools must come to be open to all and to be paid for from the public purse, and that the effectiveness of these schools would be determined by the character and skill of the teachers.²

Teacher preparation

During the 1850s both private and public institutions for the education of teachers were established in Iowa as they had been previously in the East. Of the academies Aurner said, "Some of these private normal schools were ephemeral, some were on paper only, and others died at birth; but they

¹The State Constitution of 1857 provided for the education of "all the youths of the state." While this principle received only partial acceptance in the school law of 1858, it was fully implemented in the consolidation of school laws in 1862. Aurner, 3: 375.

²Hart, p. 7.

nevertheless indicated a movement which [beginning in 1853] has been maintained in Iowa for more than sixty years."¹ The law of March 12, 1858, a bill for the "Public Instruction of the State of Iowa" became effective on March 20th. The new law was designed to provide for all rungs of the educational ladder from the elementary school to the university, and it clearly indicated the importance of preparing teachers for these free schools.

The law of 1858 contained provisions for loan scholarships for both men and women to encourage advanced preparation. Selected scholars were to be educated in the county high schools and receive fifty dollars annually for a period of three years, provided they ranked in the top half of their class. These individuals were then to teach in the common schools of the county for a period equivalent to that for which they had received the scholarship. The fifty dollars was to be deducted annually from the teaching salary. They were also accorded the option of refusing to teach and returning the money.

In a similar vein, scholarships were established at the State University to provide teacher preparation for young men to become teachers in the high schools. These scholarships were assigned by the superintendent of public instruction, and

¹Aurner, 3: 112.

no high school was to receive more than four.

In the selection of university scholars, moreover, the trustees and the high school faculty were to take into consideration the behavior, scholarship, attainments and capacity to teach, [sic], of persons not under sixteen years of age.¹

The annual loan was seventy-five dollars with a return provision similar to that of the county scholarships.

The recorded history of the period 1855 to 1865 in Iowa reflects conflicting statements with respect to the establishment of a separate normal school. Legislation in 1849 had led to the establishment of three normal schools; one at Andrew in Jackson County, one at Mount Pleasant in Henry County, and one at Oskaloosa in Manaska County. These efforts were essentially unsuccessful due primarily to financial difficulties and probably also to the fact that efforts were made in three different directions rather than concentrated in one. In 1857, prior to the passage of the Bill of 1858, Superintendent Maturin L. Fisher referred to the recent establishment of normal schools in several states but noted that there was "no necessity for such distinct schools for the education of teachers."² In a September, 1858, meeting, however, the State Teachers Association first advocated an independent state

¹Ibid., 1: 54.

²Ibid., 2: 29.

normal school.¹ The development of the normal department of the State University, the advent of the Civil War, and concentration on the school law of 1858 led to a smothering of agitation during the period from 1858 to 1865.

In relation to higher education, Iowa stood in the forefront in providing for teacher education. Aurner suggested that this may have in part been due to the Burlington proposal of 1839. In any event, the law which established the State University in 1847 included this provision for teacher education:

As soon as the annual revenue from its funds should equal \$2000 the institution should instruct free of charge, fifty persons each year 'in the theory and practice of teaching,' as well as in such branches of learning as shall be deemed best calculated for the preparation of said students for the business of common school teaching.²

The State University had opened in 1855 but was closed by vote of the trustees in 1858 and not formally re-opened until September 19, 1860. The interesting point is that during the time the University was closed, the normal school continued to function.

During the Civil War the first training school conducted by a city district was founded in Davenport. It was designed to meet the needs of the local district and

¹Ibid., p. 196.

²Ibid., p. 294.

additional impetus was given to the special preparation of teachers. Enlistment of men in Iowa regiments resulted, for the first time, in the number of women teachers exceeding that of men. Also during these years, the demand for teachers in some of the counties was greater than the supply. "In 1865 it required 9000 teachers to operate the schools of the state, while the Normal Department of the State University was graduating one one-thousandth of that number."¹

Certification of Iowa teachers

Prior to the admission of Iowa into the Union in 1846, there was no restrictive legislation regarding the qualifications of teachers. The first legislation on this matter, in 1846, granted authority to the township inspector for examining those desiring to teach with respect to both their education and their moral character. Certificates were issued to those who were found to be qualified. The lack of standards respecting the extent of qualification, however, led to a recommendation by State Superintendent Thomas H. Benton in 1848 to transfer teacher certification to the county.

I would further recommend that the duty of examining teachers should be assigned to a county instead of a township officer. It is desirable to elevate the standard in reference to the qualification of teachers. An individual of unexceptional [sic] moral character, and of extensive and literary and

¹Ibid., 1: 310.

intellectual attainments, may still be in a very small degree qualified for the business of teaching.¹

Legislation to this effect was finally adopted on March 12, 1858, when the Office of County Superintendent was created by an act of the general assembly. The county superintendent was required to examine applicants and issue certificates to those who were qualified to teach orthography, reading, writing, arithmetic, geography, and English grammar, upon evidence of good moral character. He was also given the power to dismiss teachers for immorality or incompetency and could annul their certificates for good reason.

In 1861 the state board of education created a board of educational examiners composed of the members of the faculty of the State University. This board subsequently conducted examinations for teachers and was empowered to grant state teaching certificates.

The Chartering of Iowa Agricultural College

In response to the new and pressing demands of a changing American society, the growth of industry and the need to promote sound agricultural practices, Iowa became a leader in efforts to establish an agricultural institution. Public support of education was not a new concept when in 1848 the

¹Iowa Department of Public Instruction Report, 1848, pp. 6-7.

general assembly of Iowa

. . . memorialized Congress for the donation of the site and buildings of Fort Atkinson in Winneshiek County, together with two sections of land, for the establishment of an agricultural college.¹

Congress failed to give its assent to this proposal, but agitation for state aid for the education of farmers continued.

The period of the 1850s in Iowa reflected proposals for the addition of agricultural education at the State University as well as support for the establishment of a separate agricultural college. Those favoring a separate institution, however, eventually had their way. Encouraged by citizen petitions as well as petitions from the officers of the State Agricultural Society, three men--Benjamin F. Gue, Robert A. Richardson, and Ed Wright--prepared a revised bill entitled "A bill for an act to provide for the establishment of a State Agricultural College and Farm with a Board of Trustees, which shall be connected with the entire agricultural interests of the State." According to Earle Ross, Gue's persuasive defense of the bill ended with the following challenge.

The issue, . . . would be clearly drawn in the recorded vote between the supporters of higher education for the privileged few and the advocates of educational opportunity for all. If this measure were defeated the great

¹Historical Sketch of the Iowa State College of Agriculture and the Mechanic Arts (Ames, Iowa: Iowa State College, [1920]), p. 5.

constituency would understand where the responsibility rested, and the popular will would not be thwarted for long.¹

The opposition gradually backed down, the appropriation was cut in half, and the bill was accepted by the Iowa House and Senate and approved by Governor Lowe on March 22, 1858.

The chartering of the Iowa Agricultural College on March 22, 1858, "reflected the growth and aspirations of the youthful commonwealth and its early response to the industrial movement in higher education."² Although the subjects specified in the founding organic law were all sciences or their applications, there was this further explicit provision. "After these requirements were provided for, there might be added 'such other studies as the trustees from time to time prescribe, not inconsistent with the purposes of this act.'"³

The first task was to locate and build the College.

In response to the prospectus asking for bids for the sale of land for a college farm, offers were made by the counties of Hardin, Jefferson, Marshall, Polk, Story, and Tama-- all but one near the center of the state. A [Board of Trustees] committee of three, [G. W. F.] Sherwin, [John] Pattee, and

¹Earle D. Ross, *A History of the Iowa State College of Agriculture and Mechanic Arts* (Ames, Iowa: The Iowa State College Press, 1942), p. 20.

²Earle D. Ross, *The Land Grant Idea at Iowa State College* (Ames, Iowa: The Iowa State College Press, 1958), p. 21.

³Ross, *A History of the Iowa State College*, p. 22.

[Richard] Gaines, was instructed to examine the different proposal sites and report at an adjourned meeting.¹

Story County was organized in 1853, and although sparsely settled and reputed to be unusually swampy, citizens of the area indicated a strong interest in the College from the beginning. E. G. Day, a Story County member of the first board of trustees, was instrumental in encouraging the location of the College in his county. To this end, the following appeals were made in the Nevada Advocate.

On November 30th, Mr. Day published a call for specimens of grains, seeds, minerals, stone for building, etc., probably to present to the board as an evidence of the fitness of the county for such a trust. On December 8th, there appeared another call for a public meeting, headed 'Rouse Up,' and making a strong appeal. Finally on December 15th, there was an urgent appeal, headed 'Everybody turn out!' and appointing Christmas Day as the time, and stating that it was proposed 'to donate eight hundred or one thousand dollars,' and if the location should be secured then ten thousand dollars would be expended in the county.²

The Christmas Day meeting resulted in a series of resolutions formally stating Story County's interest in the location of the Agricultural College within its lands and commitment to a ten thousand dollar (\$10,000) bond issue. In addition, "...the citizens of Story and Boone counties gave in

¹Ibid., p. 20.

²William G. Allen, History of Story County Iowa (Des Moines: Iowa Printing Company, 1887), p. 30.

notes and subscriptions \$5,340, and nine hundred and eighty-one acres of land deeded and bonded in Story and Boone Counties."¹ After reviewing propositions from several counties and taking several ballots, the board of trustees awarded location to Story County on June 21, 1859. Due to a country-wide financial depression and the advent of the Civil War, however, a decade passed before the College formally opened in 1869. During the intervening years Iowa accepted the land grant offered in the Morrill Act, the matter of whether the grant should be awarded to the State University or the Agricultural College was resolved, and the plans necessary for opening the Agricultural College were completed.

Official acceptance of the grant by Iowa, the first state to do so, led to immediate rivalry among two groups--one supporting the State University and the other, the Agricultural College. A proposal to unify the state's system of higher education by making the Agricultural College a division of the State University led to heated public meetings, claims and counter claims, and legislative debate.

During the January 1864, session of the legislature Azro B. F. Hildreth, arguing that the federal grant was to the state rather than to a single institution and that the new college needed time to develop, ". . . introduced a bill to

¹Ibid., p. 236.

provide for the teaching of agriculture and the mechanic arts at the State University and for dividing the federal grant between the University and the Agricultural College."¹ The President of the University, The Reverend Oliver M. Spencer, also argued for sharing the fund and "made the illogical plea that if his institution did not receive increased support disaster would soon follow."² Benjamin F. Gue, John Russell, and Charles Paulk, members of a General Assembly committee which had recently visited the College farm, argued cogently for the Agricultural College as follows:

It is evident to everyone who has examined the subject that this institution, [the Agricultural College], to be successful, must be entirely independent of ordinary colleges and universities where theories are taught, without practical illustrations Does any reflecting person believe that these most important provisions of the system of agricultural education can be connected with the State University, located in the heart of a populous city, where no experimental farm can be connected with it? ...We are satisfied that any such attempt at consolidation would result in endless strife, quarrels, jealousy, and confusion, and would go far towards destroying the usefulness of both. We believe it to be the duty of the Legislature to encourage and sustain both of these valuable institutions by judicious and liberal assistance, while both are left free to stand or fall upon their own merits.³

¹Ross, History of Iowa State College, p. 40.

²Ibid., p. 41.

³Aurner, 4: 208-209.

Proponents of the University plan were defeated, and the matter was resolved in favor of maintaining a separate agricultural college. On March 29, 1864, the state legislature approved a bill assigning the lands to the Agricultural College. During the next few years, plans were developed for building the college, organizing it, and securing a faculty. Formal inauguration took place on March 17, 1869, and the Iowa Agricultural College officially opened for the first year of regular work.

Summary

Prior to the American Revolution, education in America continued to emulate European models, but there were indications that the intellectual and scientific reverberations of the Enlightenment would lead to profound changes. Between 1779 and 1865 religious dominance waned and the thrust toward nationalism and the extension of democracy, accompanied by the expanding influence of the federal government, fostered demands for universal education. Jefferson's "Bill for the More General Diffusion of Knowledge" supplied the organizational framework for American public education that was championed by the Northwest Ordinance of 1787. The democratizing trends of the 1840s and the 1850s were reflected in the passage of the First Morrill Act in 1862, which provided federal grants of land for the establishment of

institutions of higher learning.

The pre-Civil War period witnessed the growth of an American ladder system of public education. Education at the elementary level, in the common schools, became available to increasing numbers of children, while education beyond the elementary years occurred principally in the Latin grammar schools and the academies. The latter emphasized the values of practical and vocational education and also served as teacher preparation institutions for the common schools. The first public high school was established in Massachusetts in 1821, and by 1865 the high school was already becoming favored as the people's choice over the academy for secondary education. Both private and public institutions for higher education continued to multiply.

The growth in the number of schools during the period led to a demand for better qualified teachers and the establishment of public institutions for teacher preparation. The first state normal school opened in Massachusetts in 1839. Additional opportunities for teacher education were provided by teacher institutes and lyceums.

The educational history of Iowa during the three decades preceding the Civil War reflected concern with both the establishment of a school system and the preparation of teachers. Although the first public schools appeared in Iowa about 1839, it was not until the provisions of the State

Constitution of 1857 were fully implemented in the consolidation of school laws in 1862 that a free public school system was fully established.

An institution for the preparation of teachers was initially recommended in 1839 in advance of actual needs. The law establishing the State University of Iowa in 1847 included specific provisions for the education of teachers, and the 1850s and early 1860s witnessed the establishment of a number of both private and public institutions for teacher preparation. Early authority for the certification of teachers was at first invested in township inspectors, later in county superintendents, and finally in a board of educational examiners created by the state board of education in 1861.

Prior to the Civil War, Iowa became a national leader in establishing an agricultural college. The Iowa legislature officially established the new college in 1858, and Story County, Iowa, was selected as the site for the college a year later. Due to the financial exigencies of the times and the advent of the war, the official opening of the college was delayed for about ten years. During this period, the Morrill Act was passed and Iowa became the first state to accept federal land grants to establish an institution of higher education. Following heated debate between two factions--one supporting the use of federal funds for the addition of a program of agricultural education to the State University, and the other supporting

the establishment of a separate agricultural college--the matter was resolved in 1864 in favor of a separate agricultural college. On March 17, 1869, Iowa Agricultural College officially opened.

CHAPTER III

EDUCATION FOR THE INDUSTRIAL AND SCIENTIFIC AGE:

THE EARLY YEARS, 1865-1900

The National Scene

The years between 1865 and 1900 comprised the early decades of the industrial and scientific age which Thomas Jefferson had foreseen. Industrialization brought forth changes in the apprenticeship system of education, in family life, and in the role of women and children. "In truth this enormous development changed the entire face and mind of America, and with it, the character of American education."¹

The federal government and education

The partnership between the federal government and education continued to mature during the post-Civil War years. The year 1867 saw the establishment of a federal department of education, which in 1869 became the Bureau of Education under the Department of the Interior. In 1890 Congress passed the Second Morrill Act, which specifically provided each land-grant institution with an annual appropriation beginning at \$15,000 and growing in yearly increments to a maximum of \$25,000. The latter sum was to become the permanent annual government contribution to each institution's current expenses.

¹Butts and Cremin, p. 300.

In addition, the law specified compliance with the principle of integration of the races or the provision of separate agricultural and mechanical colleges for blacks.

Extension of public education

The latter decades of the nineteenth century witnessed an extension of American education on all levels. Common schools continued to grow and emphasis remained primarily on the 3 R's. While private institutions played an important role, the greatest expansion occurred in state school systems. The opening of the first public kindergarten in St. Louis in 1873 signified the advent of a new concept in American education.

The rise of the public high school constituted the major development of this period. The question of whether state legislation already enacted for elementary education furnished the legal basis for secondary education was answered affirmatively in the Kalamazoo decision of 1874.¹ In general, states reacted slowly at first to the Kalamazoo decision, but beginning about 1890, the high school movement accelerated rapidly. According to Knight, there were only 100 public high schools in the entire United States in 1860; by 1880 the

¹In the Kalamazoo case, the Michigan Supreme Court held that the high school was a proper part of the public school system.

number had grown to 600 and by 1900 to 6,000.¹

The high school was established in a number of ways; e.g., according to a definite plan, through transformation of an academy, or through the gradual development of advanced work in elementary school until a separate organization was formed. The latter method was particularly evident in Iowa.² The curriculum was generally limited to a few traditional college-preparatory subjects for all students, but advocates of a broader curriculum and inclusion of the practical arts were gaining strength.

In higher education, expansion continued not only with regard to an increasing number of public and private educational institutions but also with an extension of their scope and role. An increasingly industrialized and interdependent economy demanded experts trained in new fields such as engineering, business, agriculture, and education. In accordance with the philosophy of John Dewey, curricular emphasis was gradually shifting away from mental discipline toward a concern for useful, practical knowledge. English, modern languages, and the natural and social sciences became increasingly important as did laboratory work, experimental procedures, and growth of the elective system. Land-grant

¹Knight, p. 385.

²Good and Teller, p. 222.

institutions, in particular, were expanding agricultural offerings. Collegiate-level courses in education also began to appear.

By 1897 more than half of the four hundred and thirty-two colleges and universities reported by the United State Bureau of Education were giving courses for the special training of teachers.¹

Due to the scarcity of organized materials until after 1900, however, most professors of pedagogy² relied largely upon their own practical experiences.

Teacher preparation

After 1865 teacher preparation was provided in an increasing number of institutions. While both public and private normal schools multiplied, the public institutions began training the greater number of students. State normal schools, having already begun to increase in numbers before the War, multiplied even more rapidly after 1865, and normal schools also began to be established in the South. For the most part, these schools continued to be affiliated with rural education and their primary purpose continued to be the preparation of teachers for the common schools.

¹Ibid., pp. 334-335.

²Pedagogy--(1) the art, practice, or profession of teaching; (2) the systematized learning or instruction concerning principles and methods of teaching and of student control and guidance; largely replaced by the term education. Good, p. 412.

Prior to 1900 the majority of young people entering normal schools had only an elementary education. Normal instruction was largely on a secondary level and could last from one to four years depending on the extent of high school work offered in the curriculum. As late as 1900 the great majority of normal schools offered work that extended only two years beyond the usual four-year high school course. In addition to arithmetic, grammar, and geography, the major subjects taught in the normal schools included:

. . . the history of education, school organization and supervision, school management and discipline, school hygiene, psychology and child study, ethics, school laws, and practical pedagogy.¹

Some institutions were also offering practical experience through a laboratory or model school.

The growing need for and establishment of collegiate-level teacher education programs was becoming evident in the closing decades of the nineteenth century. University chairs or departments of education provided one means of collegiate-level teacher training. Following the lead of the University of Iowa, the University of Michigan established a chair of education in 1879. Other institutions rapidly followed likewise, and the number of such positions grew from a very few in 1890 to almost 250 by the turn of the century.²

¹Knight, p. 329.

²Butts and Cremin, p. 451.

Education in Iowa

Parallelling national developments, the recorded history of Iowa during the years from 1865 to 1900 reveals the expansion of educational opportunities at all levels. Educational concerns developed in relation to this expansion. Compulsory attendance, low standards in rural schools, secondary public education, and the inadequacy of teacher preparation facilities--these were the matters of major educational concern in later nineteenth century Iowa.

Elementary education

The number of common schools continued to grow, and educators and state officials repeatedly urged adoption of compulsory attendance legislation. Governor John H. Gear in 1878, 1880, and 1882 called attention to the fact that a large percentage of children enrolled in school were not attending. In his second Biennial Message of 1882, Governor Gear noted:

Very many children, through the negligence or unwillingness of parents, do not attend school at all, . . . and I, therefore, . . . earnestly suggest that you consider the expediency of enacting a compulsory education law, which should require attendance upon schools of some kind, either public or private.¹

¹Benjamin F. Shambaugh, *The Messages and Proclamations of the Governors of Iowa*, 7 vols. (Iowa City, Iowa: The State Historical Society of Iowa, 1903), 5: 107.

Legislation to this effect, however, was not be enacted until the early twentieth century.

Low standards in the rural school constituted another major concern of educators and state officials during the later nineteenth and early twentieth centuries. An indication of rural conditions circa 1900 is contained in the following excerpts from reminiscences of a former teacher.

My first school had pupils all the way from four to nineteen. Schools were large as few ever went to a higher school. The largest I taught had thirty-four pupils on roll in all grades and in between I received the magnificent sum of \$34 per month.

Poor as they were I really liked the rural schools. We taught just the basic subjects, reading, writing, arithmetic, history, physiology, grammer some government and anything else we could think of. We had no library and few schools had an old organ. Music being my subject, I carried my fiddle to school and played while the children sang. They liked it.

The teacher in the rural school was also the janitor, building the fires on frigid mornings and lugging in as much as four tons of coal during the cold weather Why we stuck with it - don't ask me, I suppose it was because nothing paid better and there was very little else to do.¹

Secondary education

In relation to secondary education, the major development in Iowa, as well as in the nation at large, was the growing

¹Amy Ambrose Cash, "Reminiscences." This writing was found by John Baron and furnished to the author by Dr. Charles Knicker of the Department of Professional Studies at Iowa State University and dated by him circa 1900. The complete text appears in Appendix B.

public interest in education beyond the elementary level and the gradual establishment of public high schools. During the 1870s high schools were founded in the cities and larger towns, and a few began to be established in rural areas.¹ It was not until the consolidation movement began in 1897, with the establishment of the Buffalo Center School, that the vast majority of rural young people began to be offered secondary educational experiences comparable to those offered in the cities.

In common with national trends, curricula in Iowa's elementary and secondary schools showed expansion during this period. Changes in American life were urging consideration of more practical education. As early as 1877, State Superintendent C. W. von Coelln, while re-emphasizing the importance of reading, writing, and arithmetic in the elementary schools also called attention to the fact that there was too much geography being taught and not enough history, natural science, drawing, and bookkeeping.²

¹Department of public instruction files containing information on the exact number of high schools in Iowa were either destroyed or lost.

²Iowa Department of Public Instruction Report, 1875-1877, p. 45.

In the public high schools the single classical course was enlarged to include several new areas of study. In Iowa, academies had primarily provided for college preparation while the real purpose of the high school, as it had originated and developed, was the preparation of teachers. By the turn of the century, while teacher preparation remained important, the purpose of the high school was clearly broadening. In a preliminary report of July, 1899, the Committee of Twelve, appointed by the Iowa State Teachers' Association to develop a high school course of study, commented with regard to the aim of the high school. "Its specific purpose is to fit its pupils for the duties of life."¹

Teacher preparation

The expansion of education in post-Civil War Iowa was intimately related to the whole matter of teacher preparation. Obtaining a sufficient supply of competent teachers remained an unsolved problem. Teachers tended to engage in teaching only on a temporary basis and, despite expansion, teacher preparation institutions remained inadequate.

Agitation for a separate normal school under state auspices, which had remained dormant for approximately a decade, was renewed following the Civil War. State

¹Iowa Department of Public Instruction Report, 1897-1899, p. 44.

Superintendents--Oran Faville in 1865, D. Franklin Wells in 1868, and A. S. Kissell in 1870--recommended the establishment of a state teacher training facility. In both 1867 and 1869, the Iowa State Teachers' Association added its endorsement. Governor William M. Stone so recommended in 1866 and 1868, and bills establishing such a facility were introduced in the general assembly in 1866, 1868, and 1872. The culmination of all this agitation came in 1876 when the Sixteenth General Assembly finally approved the establishment of the State Normal School and located it at Cedar Falls.

The establishment of a State Normal School and the availability of other public and private programs failed to provide an adequate solution. State Superintendent Henry Sabin commented on this situation in 1895.

Our normal school at Cedar Falls turns out from its different courses 150 graduates each year. A much larger number of teachers receive partial instruction covering one year or more. We have a few private normals which do good work. Our state university and some of our denominational colleges have excellent chairs of pedagogy. But when we recall the fact that 25,000 teachers are in our schools each year, . . . we realize that our present means of training teachers for our common schools are entirely inadequate.¹

The entire period reflected continual recommendations by both state superintendents of public instruction and Iowa

¹Iowa Public Instruction Department Report, 1893-1895, p. 22.

governors regarding the necessity for additional state normal institutions. A statement by State Superintendent Richard C. Barrett in 1899 typified the repeated calls for additional institutions.

It is impossible for a single state normal school to prepare the teachers necessary to give instruction to more than 700,000 children, since all agencies combined have thus far been unable to supply the graded schools. If the country school is to be improved, the state must provide additional facilities for the training of teachers.¹

Despite these urgings, no additional state normal schools were established. Teacher training programs were offered, however, in the other state institutions of higher learning, private schools and colleges, public high schools, teachers institutes sponsored by counties, and colleges and university summer schools. On a more informal level, teachers gained educational information from teachers meetings, associations of teachers, round table discussion groups and teachers reading circles.

In addition to academies and seminaries which offered preparation for teachers, the private normal school became conspicuous. During the decade of 1876-1886 following the opening of the State Normal School, many private normal schools opened apparently with the hope of becoming adopted by

¹Iowa Public Instruction Department Report, 1897-1899, p. 99.

the state.¹ That these private endeavors continued to be considered necessary and were encouraged was clearly evident in Governor Leslie M. Shaw's First Inaugural Address in 1898.

Until she [Iowa] shall have facilities for the preparation of all teachers needed, she ought to place no bounty upon the product of her solitary institution. It can certainly be no loss to the state to award private enterprise all possible encouragement.²

County teachers institutes

Teachers institutes constituted one of the most important resources for teacher education during the late nineteenth century. Originating in the school legislation of March, 1858, and based on a provision of a minimum of thirty teachers in attendance and a session of six working days, teachers institutes continued to provide an effective means of in-service education for teachers in Iowa during the latter half of the nineteenth century. The superintendent of public instruction, who approved fifty-two institutes in 1867, noted that "in no State of the Union were more such meetings held than in Iowa, and in none were they more faithfully sustained."³

In 1871 a distinction was made between teachers institutes and normal institutes. The former, one-week institutes,

¹Aurner, 4: 347.

²Shambaugh, 7: 264.

³Aurner, 2: 165.

rapidly became the exception, while the latter, conducted over a period of several weeks, gained in popularity. By 1874 a normal institute was required in every county during the time when schools were closed. A recommended course of study was sent to the various counties from the Office of the State Superintendent. The four-week program in 1874 included the study of "orthography, reading, arithmetic, geography, grammar, physiology, history of the United States, and didactics." Topics included in the study of didactics were "school organization and classification, school discipline and general exercises, and methods of instruction."¹

In 1891 State Superintendent Henry Sabin stated that "the most important factor in the preparation of teachers in this state is the normal institute."² The graded course of study for normal institutes in 1893 reflected growth in line with school curriculum changes. Laboratory experimentation, penmanship and drawing appeared as additional subjects, and didactics had been expanded to include the study of school law and the history of education.³ Attendance at these county institutes continued to rise throughout the nineteenth century

¹Iowa Public Instruction Department Report, 1873-1875, p. 75.

²Iowa Public Instruction Department Report, 1890-1891, p. 51.

³Iowa Public Instruction Department Report, 1892-1893, p. 71.

despite the fact that teachers were responsible for their own expenses. The state offered only \$50 to each county.

Certification of Iowa teachers

From 1862 to 1873 the standard qualification for state teacher certification, as required by the board of educational examiners, was the normal course at the State University. Since the majority of applicants had neither the time nor the money to take the normal curriculum, the majority took the county superintendent's examination and obtained the county certificate. The board was abolished in 1873 on the ground that it had been of little value.

This opinion would seem to be borne out by the fact that in its entire period of existence--1862-1873--only 17 persons had presented themselves for examination before this Board, and of these eight had been rejected. Twenty state certificates had been issued during this period to persons who were holders of certificates issued in other states.¹

In 1882 a new board of education examiners was established consisting of

. . . three ex-officio members--the state superintendent, and the Presidents of the State University and the State Normal School-- and two members to be appointed by the Governor, one of whom was to be a woman.²

¹Hart, p. 161.

²Ibid., p. 162.

In 1890 the legislature granted the board authority to issue state teaching certificates, without examination to graduates of the State Normal School. Although this power was repealed in 1900, it was reestablished in the early twentieth century.

Iowa Agricultural College: The Pre-Professional
Period, 1869-1900

Iowa Agricultural College as a land-grant institution, symbolized the advent of a "new education" rising in response to the rapidly spreading effects of the Industrial Revolution. Designed to answer the needs of young people in the industrial and scientific age, land-grant institutions popularized the concept of "science with practice." By the beginning of the twentieth century, as Eddy noted, these colleges "were ready to become not just agricultural and mechanical institutions preparing farmers and mechanics, but centers of learning and preparation for all areas of life."¹

The preparation of teachers as a specifically designated field of study was apparently not envisioned by either the founders of Iowa Agricultural College or those who debated the Morrill bills. The Organic Act of 1858, establishing the College, enumerated eighteen fields of study in which the

¹Eddy, p. 87.

students could engage; education was not among them.¹ On the other hand, the legislative acts clearly left the door open for the development of curricula suited to the needs and interests of the College's students. From the beginning, the development of the College was in accordance with the true spirit of Morrill's vision of providing preparation for the various pursuits of life.

The records indicate, however, that many of Iowa Agricultural College's early students did engage in teaching and on-campus opportunities, although limited, were available for aiding prospective teachers. Teacher education, prior to the establishment of professional courses after the turn of the century, occurred primarily in the preparatory department, normal lectures, and the psychology course. Certain opportunities were also available to teachers through other courses and during the summer. The establishment of a professorship devoted to the science and art of teaching was contained in the original organizational plan for the College as outlined by President Welch, but it was not implemented. Toward the end of the century, such a chair was recommended on several occasions by officials of both the College and the state.

¹Ross, History of Iowa State College, p. 22. The eighteen fields included natural philosophy, chemistry, botany, horticulture, fruit growing, forestry, animal and vegetable anatomy, geology, minerology [sic], meteorology, entomology, zoology, veterinary anatomy, plain mensuration, levelling, surveying, and bookkeeping.

These beginnings were indicative of Iowa State's early concern for and interest in teacher preparation, and the programs conducted at the College during the nineteenth century provided an important foundation for the initiation of professional teacher preparation work in the twentieth century.

The College's unusually long, winter vacation, which lasted from early in November to early in March, afforded students the opportunity to teach in the common and secondary schools of Iowa during the winter months when the College was not in session. Recalling these days, Dean Maria M. Roberts of the Junior College¹ and Class of 1890 spoke of the large number of students who took advantage of this arrangement.

At that time [winter vacation] probably 90 percent of the students taught school in the winter. There was quite a demand for teachers in the country schools, and it was never hard to get a position.

This arrangement was beneficial for the students, the College, and the state schools. Isaac Roberts, a professor of agriculture during the first years of the College, spoke of several advantages.

¹The Junior College referred to freshmen and sophomore students at Iowa Agricultural College.

²Iowa State Student, 4 June 1932, p. 4.

The secondary schools were benefited; attention was drawn to the College; prospective students received a better preparation along the lines required for entrance to college; and the student teachers acquired experiences and secured funds to pay their expenses.¹

The role of professors as exemplars and the value of alternately learning and teaching were noted in an 1887 editorial in the Aurora, a publication of the student literary society at Iowa Agricultural College.

Almost unconsciously he is daily learning how to teach. Learning and teaching alternate, and each vacation, as he goes into the school-room again, he is prepared to do better teaching. He has learned from the professors under whom he has recited what is essential to success in teaching and what is to be avoided. He has learned how to teach in a practical way by viewing the process from all standpoints and by observation and experience.²

Iowa Agricultural College, in common with other land-grant institutions during their early years, was concerned with the problem of attracting not only a sufficient number of students but, also, students who were ready to undertake collegiate-level instruction. The high school movement was

¹Issac Phillips Roberts, *Autobiography of a Farm Boy* (Ithaca, New York: Cornell University Press, 1946), p. 101.

²*Aurora*, May 1887, p. 73.

still in its infancy¹, and the opportunity for secondary education was very limited. Low admission standards and provisions for noncollegiate or sub-freshman work attested to this problem. At the Iowa Agricultural College, applicants were required to be at least fourteen years² old and to take entrance examinations based primarily on the common branches. According to Ross, these examinations consisted of questions on

. . . local geography, arithmetic, grammar, reading, and spelling. Those regarded as 'proficient' were admitted to the college class; those whose deficiencies could probably be made up in a year were classified in the preparatory department; and a 'few who had never studied English grammar and had made little advancement in geography and arithmetic were rejected.'³

In effect, then, Iowa Agricultural College necessarily provided two courses of study for the earliest students--the college course and the preparatory course. The college course

¹In 1865 there were only 35 high schools in Iowa. This information was taken from a map of Iowa showing High Schools in 1865, which was prepared by Superintendent W. F. Cramer of Sioux City, Iowa. The map was reproduced, and formed part of a term paper entitled "History of Teaching Certification in Iowa, 1830-1908" written by Dennis Krueger for Education 204. The term paper was submitted in January, 1970, to Dr. Charles Kniker, Iowa State University, Ames, Iowa, and subsequently furnished to the author. The original source of the map, however, was not indicated.

²In 1876 the age required was sixteen.

³Iowa State Agricultural College, Fifth Annual Report of the Secretary to the General Assembly of the State of Iowa (Des Moines: State Printer, 1864), p. 4.

comprised the regular academic program for students who evidenced no deficiencies. A total of 93 freshmen, 77 young men and 16 young women, were enrolled during the first term. Total for the second term was 78 freshmen of which 63 were men and 15 were women.¹ These students had the option of pursuing the course of study offered either by the Department of Agriculture or by the Department of Mechanical Arts, which were the same except for the fourth and final year.

Preparatory department

During the first academic year, there were almost as many preparatory students (170) as college-level students (171). A total of 80 students, of which 59 were young men and 21 were young women, were admitted to the preparatory department during the first term. The figure for the second term was 90 students, of which 63 were men and 27 were women.² The primary purpose of the preparatory course was to prepare the student to enter the regular college course. It was based, therefore, on a review of the common branches. And, it is important to note, the preparatory course also served "to qualify him, [the student], to teach during the winter

¹State Agricultural College and Farm, Third Biennial Report of the Board of Trustees (Des Moines: State Printer, 1870), pp. 8-9.

²Ibid.

months."¹

The preparatory students came primarily from Iowa's rural farming stock. More often than not, they were products of the local common school whose curriculum was comprised of the common branches--the 3 R's--and whose teacher was most likely a recent graduate of the same rural school.

The courses of instruction offered and the texts which were used for preparatory students were as follows:

First Half Year
 Arithmetic -- Robinson's Higher
 Descriptive Geography -- Mitchell's School
 English Grammar -- Green

Second Half Year
 Algebra -- Robinson's Elementary
 Natural Philosophy -- Olmsted's School
 Composition -- Quackenbos²

The course of study for the preparatory department, which offered sub-freshman or noncollegiate grade work, revealed changes during subsequent years, apparently in response to expanding school curricula. By 1880, for example, mathematics and English remained prominent, but drawing, physiology, hygiene and zoology had been added. The instructional staff of the preparatory department came from the regular college faculty. It is interesting to note, however, that one

¹Iowa Agricultural College and Farm, Second Biennial Report of the Board of Trustees (Des Moines: State Printer, 1868), p. 35.

²Ibid., p. 30.

reference indicates that the Board of Trustees in 1877 authorized the president of the College to secure the services of students as teachers in the preparatory department.¹ This is the only time this is mentioned, and there is no evidence to suggest whether the authorization was ever carried out.

As opportunities for secondary education grew, the sub-freshman program was discouraged by the College and enrollment in the preparatory department decreased. President Chamberlain, speaking of the decade 1879-1889, reported on the program as follows:

Six years of the ten, indeed, there was a small sub-freshmen or preparatory class for one-half of each year. But it was never advertised prominently nor encouraged, the attendance averaged thirty-one only, and three years ago, [1886], the class was discontinued and the fact prominently advertised in the catalogue. The chief reason for the discontinuance was lack of dormitories and recitation rooms.²

In 1889, however, the faculty and the trustees unanimously voted to reestablish and advertise preparatory work.

The chief argument is that this is necessary in order to reach one main class for whom the College was founded--the farmers. Most of the country district schools do not furnish the instruction required for admission to our

¹Iowa Agricultural College and Farm, Seventh Biennial Report of the Board of Trustees (Des Moines: State Printer, 1877), p. 317.

²Iowa State Agricultural College and Farm, Thirteenth Biennial Report of the Board of Trustees (Des Moines: State Printer, 1889), p. 13.

freshman class. One half year's instruction would supply this lack.¹

At the turn of the century, the College's academic year was changed in direct response to the wishes of Iowa's citizenry as well as in an effort to harmonize with the majority of institutions of higher learning throughout the nation. In addition, Iowa Agricultural College was attracting comparatively few of the graduates of city and town high schools who were ready to attend college in the fall as opposed to waiting until the following spring. While the new academic year, running from September to June, was responsive to local needs and general trends, it did terminate the lucrative endeavor of the preparatory students--teaching in the public schools during the winter vacation. The new arrangement apparently proved satisfactory.

There never has been regret that the schedule was changed. Industrial conditions changed about the same time and students deprived of the opportunity to teach during the long winter vacation found other employment which was just about as remunerative.²

The growing high school movement,³ which was producing better prepared students, and the change in the College's academic

¹Ibid., p. 141.

²John B. Hungerford, "Sketches of Iowa State College," (Ames, Iowa: Iowa State University, 1941), p. 142. (Type-written copy of original manuscript prepared 1935-1940.)

³Figures from the state department of public instruction reports show an increase in number of high schools from 35 in 1865 to 169 (in cities over 1,000 population) in 1900.

year underscored the increasing impracticality of the preparatory department. In 1910 the preparatory department was premanently abolished.

President Welch and normal instruction

The first president of Iowa Agricultural College, Adonijah Strong Welch, had been highly recommended for the position by several college presidents, and he possessed an impressive pedagogical background. He had organized Michigan's first grade school and served as its principal; he had served as the principal of the normal school at Ypsilanti; he was active in the promotion of teachers' institutes and of a state teachers association; and he had also championed the technical training movement by serving on the board of the Michigan Agricultural College.¹ It is not surprising, therefore, to find that Welch considered teacher education exceedingly important and took appropriate steps to insure its development at the Iowa Agricultural College. Evidence of Welch's belief in the importance and necessity of pedagogical instruction was his creation of teacher preparation work outside the preparatory department. Clearly, President Welch saw teacher preparation as one of the "pursuits and professions of life" for which the College was to provide. The purpose and rationale for normal work as Welch originally envisioned it was

¹Ross, A History of Iowa State College, p. 60.

. . . to give special training to those of both sexes who chose to teach either for a long or limited period in the schools of the state. This institution, while accomplishing its special mission, ought to make some contribution to the educating forces outside its walls. No state, however it may multiply normal schools, can make provisions adequate to its wants in this regard. Shall we not do our part among the noble workers who are striving to increase the number of efficient teachers for the public schools?¹

Welch accurately foresaw that many students would teach during the winter vacation and would benefit from a short course of normal instruction. To meet this need, he created the first normal class, which he, himself, taught during the second term of the first academic year. In 1869 this class had an enrollment of 100 students out of a total institutional enrollment of 168 young men and women combined.² Thereafter enrollment declined and averaged approximately fifty students yearly.

The President's Report of 1871 to the board of trustees contained a description of this work, entitled Normal Instruction. A series of lectures was to be given during the closing month of each year and was open to any student who expected to teach in the schools of the state during the winter vacation.

¹President Welch Collection, Class No. AH-1.1, Box No. 2, Folder No. 1-5, Iowa State University Special Collections, Ames, Iowa.

²Iowa State Agricultural College and Farm, Third Biennial Report of the Board of Trustees (Des Moines: State Printer, 1870), pp. 8-13.

The following subjects were included: "organization and government of the schools; methods of teaching spelling, reading, geography, grammar, and arithmetic; object teaching."¹ In addition, this course was to be accompanied by a rigid review of the common branches.

Normal instruction was again offered during the second term of 1872 and had 50 students in attendance out of a total student population of 263. In 1873 Welch taught a normal class during the second term with 56 students out of a total student population of 263. During these years curricular content was expanded to include:

Methods of Teaching; Natural order of Studies corresponding to the order of evolution of the intellectual powers; Mental Philosophy as applied to the school-room, and rigid review of the common branches.²

The change in course content from the more specific how-to-do-it approach of 1870 to the broader more general and theoretical approach of 1872-1873 seems to indicate a need for a more sophisticated approach to the teacher-learner phenomenon, greater emphasis on psychology, and provision of a more comprehensive background for those who were to enter teaching.

¹Iowa State Agricultural College and Farm, Fourth Biennial Report of the Board of Trustees (Des Moines: State Printer, 1871), p. 38.

²Iowa State College and Farm, Fifth Annual Report of the Board of Trustees (Des Moines: State Printer, 1873), p. 5.

The content remained identical for the years 1874 and 1875. Following 1875 no further references to normal work appeared in either the Biennial Reports of the College or the College Catalogues.

Psychology

In addition to his normal lectures, President Welch proposed in 1869 and subsequently taught, psychology, commencing with the first senior class in 1872 and continuing until 1887. Psychology was later taught by President W. I. Chamberlain from 1887 to 1890 and by President W. M. Beardshear from 1890 to 1900. The major thrust of the course as envisioned by Welch and subsequently continued by later presidents was, apparently, teacher preparation.

The work in psychology is not only designed for those who enter the teaching profession, but specialized courses for the development of business efficiency are given to technical students.¹

This fact is reinforced by an editorial in the student literary magazine. "Then after the student has taken psychology under Dr. Welch he is better prepared for teaching than graduates of most normal schools."²

¹Pammel Collection, vol. 25, "An Historical Sketch of the Iowa State College of Agriculture and Mechanic Arts," Iowa State University Special Collections, Ames, Iowa.

²Aurora, May, 1887, p. 73.

Not only at the Iowa Agricultural College, but elsewhere across the nation, pedagogical instruction was often offered by teachers of philosophy and psychology.

Early educationists turned to German universities for guidance. In Germany pedagogy was often subsumed under some other discipline such as philosophy, psychology, or history.¹

Professor W. H. Wynn of the Agricultural College commented on this arrangement in 1875.

These men who reason about the human mind, whether from the standpoint of science or consciousness, whether under the inspiration of a sensational or spiritualistic philosophy, are naturally the teachers of our teachers, and the men who ultimately determine the morale of the teacher's profession.²

The primary objectives of the psychology course during Welch's instructorship were to provide the student with "a thorough insight into human nature, and the springs of human conduct." In addition to his classes, Welch was also delivering his psychology lectures to teachers at various normal institutes. The Aurora noted Welch's wide influence. "He was a 'teacher of teachers' in the educational fraternity of our country at large."³

¹Tyack, p. 416.

²Aurora, August, 1875, p. 1.

³Aurora, April, 1889, p. 4.

Welch's psychology lectures were compiled during the late 1880s and apparently formed the basis for two books--Talks on Psychology published in 1888 and The Teachers' Psychology published in 1889. The prefaces of both books clearly explain their purposes. Talks on Psychology was prepared for the sole purpose of "helping teachers prepare for more effective work in the school-room."¹ The Teachers' Psychology was "written in answer to meeting an urgent need expressed by teachers themselves."² Welch believed that a study of the mind was of equal importance with a knowledge of subjects to be taught in the preparation of the teacher. Although it is not clear which of these books was utilized, President Chamberlain reported using Welch's Psychology as a textbook for his psychology class in 1889.³

A few selected topics from Talks on Psychology indicate Welch's strong concern for the education of teachers through psychology.

Education: What is it?
Physical Education
Mental Education
Intellectual Education
Moral Education

¹A. S. Welch, Talks on Psychology (New York: E. L. Kellogg and Company, 1888), p. 3.

²A. S. Welch, The Teachers' Psychology (New York: E. L. Kellogg and Company, 1889), p. iii.

³Iowa Agricultural College and Farm, Thirteenth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1889), p. 63.

The Primary School Period--The Formal Training
of Sight and Touch in Concert
Primary Drawing
Arrangement of Progressive Lessons
Child Singing
Phonic Drill for Primary Classes
Nature's Method applied in Learning to Read
Spelling Learned by Writing¹

Additional opportunities for teacher preparation

Interest in preparing students in and for pedagogy was also evidenced in less formal ways. Lectures, articles, and proposed methods of teaching were offered, particularly as they related to industrial education and science in the public schools. As early as 1884, W.H. Wynn, Professor of Literature and History, was contributing a series of articles dealing with the problems of industrial training in the public schools.² Wynn was well qualified to speak out on this matter of increasing importance in Iowa. In addition to his fourteen years at Iowa Agricultural College, he had served as a teacher, as a principal of Hamilton Academy for six years, and as a superintendent of schools in Butler County, Ohio for nine years.³

Professor C. E. Bessey, Wynn's colleague and a former school teacher himself, believed that an early introduction of

¹Welch, Talks on Psychology, pp. 10-11.

²Aurora, August, 1884, pp. 185-186.

³Bomb, 1896, p. 52.

science into the common schools was desirable. His methods for teaching these elements were apparently proposed to his college classes.

Begin by making yourself well acquainted with the trees, the shrubs, and the wayside herbs; the birds, the quadrupeds, the frogs, and the snakes in your neighborhood and then take these as your subjects, not for old-fashioned barren 'object lessons' but for suggestive little talks. Tell them frankly that there are a great many things you do not understand, but let there be nothing you do not wish to understand; possess this spirit yourself and your pupils will certainly acquire it.¹

Just prior to the turn of the century, President Beardshear, noting that several states in the East had developed plans for teaching nature study and elementary agriculture in the country schools, recommended such a program for Iowa schools and suggested that Iowa State College² should be instrumental in its development.

Iowa should not be behind in a movement of such practical moment and worth. God Almighty has predestined these Iowa prairies as an agricultural region. We occupy an unusual spot of the world. The legislature should enable the state college to inaugurate movements of this kind at once.³

¹Aurora, May, 1877, p. 6.

²In 1898 the board of trustees adopted the official seal with the inscription: "The Iowa State College of Agriculture and Mechanic Arts - Science with Practice." The name had been in common use since 1896.

³Iowa Agricultural College and Farm, Eighteenth Biennial Report (Des Moines: State Printer, 1899), pp. 14-15.

The value of laboratory experimentation was being increasingly recognized, and there are numerous references in the latter decades of the nineteenth century to the excellent laboratory facilities at Iowa State College and their availability to teachers and administrators in the state schools. As early as 1877 school administrators were offered the opportunity to utilize the College's laboratory facilities during the summer. "Principals of graded schools are invited to spend their vacations in the botanical, the physical or the chemical laboratories."¹ In 1883 Professor Charles E. Bessey, responding to an apparent demand, suggested a summer course for teachers in botany. He hoped, he said, "through such an agency to spread the gospel of teaching botany as the study of 'living plants' rather than as a mere classification."² In 1890 the College announced that "principals and teachers of public schools, seminaries and academies of the state may avail themselves of the summer school of science which will begin in July and last five or six weeks."³ Still later, in 1897, Professor A. A. Bennett, again emphasizing the value of the laboratory method, boasted that

¹Iowa Agricultural College and Farm, Seventh Biennial Report to the Board of Trustees (Des Moines: State Printer, 1877), p. 35.

²Aurner, 4: 243.

³Aurora, June, 1890, p. 50.

Teachers of chemistry in the public schools will find here good advantages for the laboratory study of chemistry, the only really profitable method of study.¹

Thus, through not only formal opportunities afforded in the preparatory department work, normal lectures and psychology courses, but also through less formalized opportunities, teacher preparation was being offered to both prospective teachers and those already engaged in teaching and administration.

Chair of pedagogy

In addition to both the formal and less formal opportunities for teacher education, interest was expressed by both college and state officials during the years from 1869 to 1901 in establishing a professional chair of pedagogy. In the President's Report to the board of trustees dated January 10, 1870, Welch noted that the final plans for the organization of the College proposed to provide professors, not only for the initial courses of study, but also additional professors, among whom would be "A Professor of the Art and Science of Teaching."² Although it seems quite probable that Welch did not believe that such action would be delayed more than thirty

¹Iowa Agricultural College and Farm, Seventeenth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1897), p. 17.

²Iowa Agricultural College and Farm, Third Biennial Report to the Board of Trustees (Des Moines: State Printer, 1870), p. 12.

years, no further reference to the establishment of such a professorship appears to have been made during Welch's presidency. One can speculate that perhaps, since Welch was largely fulfilling such a function himself, he did not formally pursue the matter.

The appointment of William M. Beardshear as President of Iowa Agricultural College in January, 1891, marked the revival of interest in the establishment of a chair of pedagogy. Prior to his appointment as president (at Ames), Beardshear had served as the president of Western College at Toledo, Ohio and also as the superintendent of the West Des Moines (Iowa) public schools.¹ In 1894 Beardshear served as president of the State Teachers' Association. His outstanding contributions to education were recognized in 1901 when he was

. . . unanimously accorded the distinguished honor of the Presidency of the National Education Association, an honor never before conferred upon a citizen of Iowa, or an officer of a land-grant college.²

Beardshear's wide educational experience prompted him, a few years after assuming the presidency of Iowa Agricultural College, to call for the establishment of a chair of pedagogy at the College.

¹Iowa Agricultural College and Farm, Fourteenth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1891), p. 126.

²Iowa State College, Catalogue, 1902-1903, p. 11.

Our board of trustees have [sic] been petitioned by a large number of the leading educators in the state to establish a chair of pedagogy in connection with the college. Our long winter vacation makes room for a large percent of young people to teach in the public schools, so that we always have a larger percent of student teachers than any other institution of learning in the state, excepting the State Normal School. Our excellent laboratory facilities in the sciences, our thorough instruction in mathematics and the modern languages as well as psychology, can all be turned into a chair of this kind, without extra expenditure. For equipment and other expenses of the chair, we would need \$4,000 for the biennial period.¹

Again in 1897, in his report to the board, Beardshear cited the growing demand for the establishment of a formal chair of pedagogy.

Quite a number of our graduates desire instruction in the methods of teaching The establishment of this chair is endorsed by the teaching fraternity of Iowa.²

Not only did Beardshear recommend such a chair, but he apparently used his personal influence to attain his objective. It was reported in the Cedar Rapids Evening Gazette of February 16, 1898, that Beardshear

was lobbying here [in Des Moines] most of the winter. He wanted among other things to establish a chair of pedagogy. The legislature

¹Iowa Agricultural College and Farm, Sixteenth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1895), p. 11.

²Iowa Agricultural College and Farm, Seventeenth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1897), p. 9.

refused to grant it, but the president has established the chair of pedagogy just the same.¹

During the last few years of the nineteenth century, two of Iowa's governors and two state superintendents clearly recognized the fact that many Iowa Agricultural College students and graduates were entering teaching and called for an appropriate chair at the College. In 1896 Governor Frank Darr Jackson made the following recommendation in his biennial message to the legislature.

Many of these graduates find their way into our public schools as teachers. The establishment of a chair intended to instruct them in the art and science of teaching would greatly add to the efficiency of their work.²

Governor Francis M. Drake echoed this recommendation in his biennial message of 1898.

As school teaching is the resort of a large number of the students during the vacation, which is in winter, I recommend that a chair of pedagogy be authorized in the school. It would be a great benefit to many of the students in the direction indicated, but it would be of more value to the public because of its better preparing for their work those who go out to teach.³

¹President Beardshear Collection, Class No. AH - 1.5, Box No. 1, Folder No. 1 - 7, Iowa State University Special Collections, Ames, Iowa.

²Shambaugh, 7: 29.

³Ibid., p. 135.

State Superintendents Henry Sabin and Richard C. Barrett also recognized that many students from the Agricultural College were teaching in the state schools. Henry Sabin spoke of the benefits of establishing a chair of pedagogy at the College in 1897.

The arrangement of the terms at the agricultural college is such as to give students the best possible opportunity of teaching during the winter term. Many avail themselves of this privilege. Instruction in the science and art of teaching would be of the greatest possible benefit to them in their work.¹

In 1899 State Superintendent Richard C. Barrett added his endorsement.

The establishment of a chair of pedagogy has often been recommended, and I take pleasure in renewing the same. The long winter vacation permits the teachers in common schools to teach a winter term of fourteen or sixteen weeks without a break in the college course. Practical instruction in school management and methods of teaching would prove beneficial to both teachers and pupils.²

One dissenting voice, however, must be noted. Governor Leslie M. Shaw in 1900 not only stated his opposition to the establishment of such a chair in his first biennial message, but also first raised the question of duplication among the three state institutions of higher learning.

¹Iowa Public Instruction Department Report, 1895-1897, p. 40.

²Iowa Public Instruction Department Report, 1897-1899, p. 31.

I doubt the wisdom of duplicating unnecessarily the departments of our three great universities. . . . The normal schools, assuming we must have more than one, should not be the colleges of liberal arts, and neither the University nor the College of Agriculture and Mechanic Arts has place or room for chairs of pedagogy.¹

Although neither the Biennial Reports nor the Catalogues of Iowa State College specifically note the establishment of a chair of pedagogy at the turn of the century, professional education courses were established at the College in 1901 during the presidency of William M. Beardshear.

Contributions of Iowa Agricultural College to the state teacher supply

In addition to the frequent references by college and state officials during the nineteenth century regarding the fact that Agricultural College graduates and undergraduates were entering teaching, the records also contain several more specific numerical references and indications of the College's influence on the public school system. As early as 1875, for example, J. H. Franks, Superintendent of Story County, reported:

We have within our county the Agricultural College whose influence on our public schools is inestimable. Yearly there go out from this institution into the teachers' profession many young men and young women who become our best educators.²

¹Shambaugh, 7: 288-289.

²Iowa Department of Public Instruction Report, 1873-1875, p. 174.

Reporting on the activities of undergraduates in the classes of '74, '75 and '76, the Aurora, for example, noted:

- '74 Miss Eva E. Paull left us on the 28th for her home in Sigourney. After a short resting spell, it is her purpose to teach a winter's school near Vinton.
- '75 R. P. Kelley is Principal of the Cambridge Graded Schools.
- '76 T. B. Crow is Pedagoging it at Logan.¹

As of March, 1879, there existed a total of 119 Iowa Agricultural College alumni. Of this number, thirty-nine were engaged in public school instruction.² A year later, the Aurora noted the reasons for many of the College's students engaging in teaching.

It . . . [is] no mere accident that so many of our number are either temporarily or permanently engaged in educational work throughout the state and elsewhere. But it is because we can furnish teachers with ideas suited to the temper of this time of progress. And I will venture the bold assertion that no other institution in Iowa is influencing the public school system in a degree to be compared with this college of Agricultural and the Mechanic Arts.³

It is reported that prior to 1882 only six percent of the living men graduates of the College entered either practical farming or professional agriculture, nine percent became engineers or mechanics, while seventeen percent engaged in

¹Aurora, September, 1873, p. 5.

²Aurora, October, 1879, p. 2.

³Aurora, August, 1880, p. 97.

teaching or similar professional work. Forty percent were reported to be engaged in the professions--law, medicine or the ministry.¹

In 1887 the Aurora's "Alumni History" section reported that there were gainfully employed 19 alumni as Professors in Colleges or Universities, 2 as County Superintendents, 46 as teachers in Public Schools, and 1 Music Teacher, out of a total of 351 graduates.²

Reports of the state superintendent of public instruction in 1893 and 1901 provide further specific information on where Iowa teachers were educated. Table 1 shows that in 1893 Iowa Agricultural College was contributing a greater number of teachers than was the State University of Iowa. For 1901 the figures show a rise in the number of Iowa State College graduates in teaching, but a decrease in the number of nongraduates and, therefore, a smaller total number of teachers educated at Iowa State than at the State University. The reason for this decrease can probably be attributed to the change in the College's academic year at the turn of the century, which ended the opportunity for undergraduates teaching in the public schools during the long winter vacation. The two reports, therefore, are not entirely compatible.

¹A Historical Sketch of Iowa State College, p. 10.

²Aurora, August, 1887, p. 59.

Table 1. Where Iowa teachers were educated, 1893 and 1901^a

Number of graduate licensed teachers	1893	1901
The State University, Iowa City	71	138
The State Normal School, Cedar Falls	277	707
The State Agricultural College, Ames	60	97

Number of nongraduate licensed teachers	1893	1901
The State University, Iowa City	114	178
The State Normal School, Cedar Falls	917	1515
The State Agricultural College, Ames	224	159

^aThese figures were taken from the Iowa Public Instruction Department Reports, 1892-1893 and 1900-1901, pp. 75 and 131, respectively.

Thus, throughout the nineteenth century Iowa Agricultural College was providing teacher education and playing an important role in furnishing teachers for the state schools. Primary reasons for the College's work in teacher preparation included: the state's failure, despite repeated urgings, to establish additional normal schools; the need for more competent teachers, which was clearly emphasized by the poorly prepared students who sought admission; the College's central location; and perhaps, above all, the leadership of Presidents Welch and Beardshear who guided the young College through the majority of its first thirty years and who possessed such strong pedagogical backgrounds, interests, and beliefs. In the

twentieth century, the teacher preparation program, which had taken root in the nineteenth century, would gain professional status and expand to include an increasing number of fields.

Summary

The latter half of the nineteenth century witnessed the dawning of the industrial and scientific age, which would profoundly influence the development of American education. The establishment of a federal department of education in 1867 and the passage of the Second Morrill Act in 1890 indicated a strengthening of the partnership between the federal government and education.

Public education continued to expand on all levels. While curricular emphasis remained primarily in the tradition of earlier periods, there was growing recognition of the value of and need for useful, practical knowledge. The rise of the public high school constituted the major educational development of this period.

Teacher preparation was being provided for increasing numbers of students in both public and private normal schools. The majority of these students had only elementary educations and, therefore, instruction was primarily on a secondary level. Toward the turn of the century, however, colleges and universities began to provide collegiate-level teacher preparation courses and programs.

Paralleling national developments, educational opportunities in Iowa also expanded on all levels, and curricula began to emphasize practical education in addition to traditional studies. The public high school movement progressed slowly and was largely limited to cities and towns. Low standards in rural schools remained a major concern.

Obtaining a sufficient supply of competent teachers to serve increasing numbers of students also constituted a problem which defied solution. The high schools prepared some teachers but, for many, county normal institutes, which by 1874 had largely supplanted teachers institutes, were the most important agency for teacher preparation. Despite the establishment of a state normal school at Cedar Falls in 1876, institutions for preparing teachers remained inadequate for the demand. Urgent pleas for additional state normal schools were ignored by the state legislature. Responsibility for teacher certification remained within the jurisdiction of the county superintendents and the board of educational examiners, except for the period between 1873 and 1882 when the latter was abolished.

Popularizing the concept of "science with practice," Iowa Agricultural College, as a land-grant institution, symbolized a new education which was designed to meet the challenges of the industrial and scientific age. While teacher preparation was not specifically designated as an area of

concentration in the First Morrill Act, the door remained open for land-grant institutions to add curricula suited to the needs and interests of their students.

From the beginning Iowa Agricultural College provided opportunities for teacher preparation on a nonprofessional basis through the preparatory department, normal instruction, and the psychology course. Additional opportunities in teacher preparation were offered through summer experiences in the college laboratories. The inadequacy of state teacher preparation programs, the abundant opportunities for students to teach during the College's long winter vacations, and the deep educational interests and beliefs of the young College's early presidents were major factors in developing the early work for teachers. Despite the recognition of several governors of Iowa Agricultural College's large contribution to the state teacher supply and the recommendations of both Presidents Welch and Beardshear that a chair of pedagogy be established at the college, no professional education program was initiated during the nineteenth century.

The following time line summarizes major social and legislative events in teacher education on the national scene, in Iowa, and at Iowa Agricultural College from 1858 to 1900.

MAJOR EVENTS - TEACHER EDUCATION

TIME LINE
1858 - 1900

<u>National</u>	<u>Iowa</u>	<u>Iowa Agricultural College</u>
		1858 Iowa Agricultural College chartered - March 22, 1858
		1860
Civil War begins		1861
Morrill Act of 1862	Iowa legislature accepts land grant under Morrill Act September 11, 1862	1862
Civil War ends		1865
U.S. Bureau of Education established		1869 Formal opening of I.A.C. - March 17, 1869 President Welch begins Normal Instruction
		1870 Welch notes final organizational plans call for "A Professor of the Art & Science of Teaching"
	County normal institutes established	1871
		1872 Psychology first offered
		1875 Normal instruction ends
	State Normal School established at Cedar Falls	1876

Time Line 1858 - 1900 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa Agricultural College</u>
		1877 First collegiate experimental kitchen opened at I.A.C. by Mary Welch
		1880
		1885
		1886 Preparatory department discontinued
		1889 Preparatory course reestablished
		1890
The Second Morrill Act		1895 President Beardshear calls for "Chair of Pedagogy"
	Governor Jackson calls for chair of pedagogy at I.A.C.	1897 President Beardshear calls for "Chair of Pedagogy"
	Consolidation begins	
	Governor Drake recommends chair of pedagogy at I.A.C.	1898 Iowa Agricultural College becomes Iowa State College of Agriculture & Mechanic Arts
	State Superintendent Barrett recommends chair of pedagogy at I.S.C.	1899 Preparatory department closed

CHAPTER IV

EDUCATION FOR THE INDUSTRIAL AND SCIENTIFIC AGE:

THE LATER YEARS, 1900-1917

The National Scene

Industrialization, the expansion of transportation and communication, population growth, and urban development continued into the twentieth century causing further expansion and changes in the educational system. Federal participation in teacher education became a reality. Growth continued on all rungs of the educational ladder, and on all levels curricula increasingly reflected the changing times.

The federal government and education

During the first two decades of the twentieth century, many bills were introduced in Congress which reflected a renewed interest in federal participation in common school education, with particular emphasis on vocational education. The Nelson Amendment to the Morrill Act, which was passed March 4, 1907, provided federal support for teacher education programs in land-grant institutions which were established and conducted under provisions of the First and Second Morrill Acts. A specific provision of this amendment stated:

That said colleges may use a portion of this money for providing for the special preparation of instructions for teaching the elements of agriculture and the mechanic arts.¹

Elementary education

The common or elementary school system continued to expand and compulsory education, although varying widely from state to state, was finally accepted in all states by 1918. The curriculum began to reflect changes in harmony with national changes. After 1900 schools started to place greater emphasis on the development of practical arts such as manual training, cooking, sewing, and laboratory experimentation. Nature study also began to be included in the curriculum. Although some experimentation in method was appearing in the larger cities, teaching, for the most part, continued in the traditional manner of the pre-Civil War period, "viz, lecture, recitation, and drill, often with slate boards."

Secondary education

The number of public high schools continued to multiply and curricula at this level also reflected the changes in national lifestyle. "By the end of World War I the number of high schools had spiraled to 25,000 with an attendance of over 1,600,000 youngsters."² No longer designed to prepare a

¹Brunner, p. 61.

²Butts and Cremin, p. 419.

selected few for college but rather to prepare young people for an increasingly complex life, high schools of the twentieth century assumed several different forms. While the majority were comprehensive and offered, therefore, a variety of programs, differentiated high schools which specialized in manual training, commercial, and agricultural programs were also being established. The increasingly commercial and industrial character of the American economy led to a growing demand for manual, industrial, and commercial instruction on the secondary level. Although these demands were countered by statements defending the traditional classics, changes were gradually occurring.

By 1918 the broad outlines of the secondary curriculum had expanded to include mathematics, English, science, social studies, foreign languages, physical education, commercial subjects, and the fine and practical arts. The latter areas enjoyed a rapid increase between 1900 and 1918, with subjects like typewriting, stenography, bookkeeping, commercial law, domestic science, industrial arts, and manual training fairly common by 1918¹

Higher education

About 1900 new philosophic and scientific movements in education led by Dewey, James, and Thorndike contributed to the building of new confidence in the professional study of

¹Ibid., p. 440.

education. "Education" rather than "pedagogy" was increasingly becoming part of the work of colleges and universities. By the first decade of the twentieth century, most of the state universities of the Middle West had reorganized their departments of education into independent schools of education.¹

The reorganization of normal schools into teachers colleges was a major development of the early twentieth century. The tremendous growth in the number of high schools and high school graduates, beginning after 1890 and accelerating in the twentieth century, made it unnecessary for normal schools to continue to provide high school instruction. By 1918, "nearly half of the states required high school graduation for admission to normal schools."² A primary concern was that the normal schools not simply add two more years to their programs, but that they become colleges in fact as well as in name. Although the progress of the movement, was slow, it was steady. The beginning came in 1897 when the Michigan legislature, in order to recognize instruction on the collegiate level, changed the nomenclature of the normal school at Ypsilanti to the Michigan State Normal College. "In 1913, there were only nine such colleges, but by 1920 there were forty-six. The number thereafter grew rapidly."³

¹Brubacher, p. 489.

²Knight, p. 430.

³Butts and Cremin, p. 451.

Improvement in teacher certification procedures also began during this period as local control was gradually replaced by state control. "By 1910 more than three-quarters of the states, [including Iowa], mentioned professional education courses in their certification requirements."¹

In addition to normal schools, teachers colleges, and university departments of education, other agencies also played significant roles in teacher education. Several had pre-twentieth century beginnings but reached maturity after 1900. The teachers institute, usually county-run, continued to grow and in many states provided the only viable means of teacher preparation for rural teachers. University summer programs offered an increasing number of teachers opportunities for meeting new state certification requirements, for completing vocational course work, and for pursuing professional advancement. In addition, universities offered extension and correspondence work which reached many additional teachers.

Education in Iowa

During the first two decades of the twentieth century educational developments in Iowa, for the most part, continued to reflect those occurring nationally. Some nineteenth century

¹Ibid., p. 453.

problems were being solved while others, notably the shortage of teacher preparation facilities and teachers, continued.

Elementary education

The number of common schools continued to rise, and kindergarten became a part of the common school experience. The concern of educators and state officials regarding poor school attendance was allayed in 1902 with the passage of compulsory legislation for children between the ages of seven and fourteen.¹ A broadening of the curriculum continued, and work in the practical arts was gradually being introduced into the upper grades in some elementary schools. Low standards in rural schools remained a concern, but an increase in consolidation was helping to raise standards.

Secondary education

Urban public secondary schools continued to multiply, and a major new development occurred in the rural areas. The success of a few early consolidation ventures, increased public awareness of the need for rural secondary schools, and the encouragement of a series of state superintendents led to the establishment of more and more rural schools. In 1913 the consolidation movement received great impetus from legislation which provided for state aid on the condition that curricular

¹In 1913 the compulsory age limit was raised to sixteen years. Hart, p. 166.

and other requirements was met. By 1916 there were a total of 187 consolidated districts.¹

Expansion of the practical arts

Interest in introducing the practical arts into the public schools, which had begun in the nineteenth century, accelerated during the early twentieth century. The State Teachers' Association adopted annual resolutions in 1901, 1902, and 1910 endorsing the introduction of manual training into the schools.² The 1902-1903 report of State Superintendent Richard C. Barrett includes a chapter devoted to "Manual Training and How to Introduce it into the Schools."³ The 1904-1905 report contains a section devoted to the work in elementary agriculture then occurring in the state.⁴ In 1913 the Thirty-fifth General Assembly emphasized the new importance being attached to the practical arts by passing legislation requiring the teaching of agriculture, domestic science, and manual training in all the public schools of the state after July 15, 1915. The need for special preparation of teachers

¹George S. May, Growth of Consolidation, The Palimpsest 37 (January 1956): 30-33.

²Hart, p. 181.

³Iowa Department of Public Instruction Report, 1902-1903, pp. 6-28.

⁴Iowa Department of Public Instruction Report, 1904-1905, pp. 31-43.

in these areas would further enhance the development of Iowa State College as a teacher preparation institution.

Teacher preparation

The teacher shortage and the lack of adequate teacher preparation institutions continued into the early twentieth century. There were urgent calls for additional state normal schools. On July 13, 1913, the Iowa State Board of Education made the following statement and recommendation:

The facilities for the training of teachers for the rural and elementary schools of Iowa are inadequate, and the Board recommends to the Legislature the establishment of additional normal schools to aid in this great work, perhaps the greatest which the State has to do.¹

In 1916 the United States Bureau of Education commission, which was established to survey the institutions of higher learning in Iowa, again recommended the establishment of additional normal schools. The commission noted that it was

. . . perfectly clear that there are today no agencies in Iowa adequate to furnish proper training to the number of teachers annually required in the schools of the State.²

Despite these formal calls for the establishment of additional state normal schools, the Iowa legislature took no action.

¹Minutes of the Iowa State Board of Education, Vol. I, April 20, 1909 - April 14, 1914, p. 506.

²U.S. Bureau of Education, State Higher Educational Institutions of Iowa, Bulletin, No. 19 (Washington: Government Printing Office, 1916), pp. 56-57.

Although no new normal schools were founded, additional opportunities for teacher preparation were initiated during the years from 1900 to 1917. The precedent for high school normal training had been set in Davenport, Iowa, in 1876, but this program, at that time, formed the exception rather than the rule. The real impetus for normal training in the public high schools came in 1910. Noting that very few high schools offered real normal training, the Thirty-fourth General Assembly passed the High School Normal Training Law. Under this law, authority was given to the Superintendent of Public Instruction to designate certain high schools as Normal Training High Schools. Schools desiring to be so designated were required to offer to a minimum of ten students in the eleventh and twelfth grades

. . . teachers' courses in arithmetic, grammar, history, reading, and also given instruction in home economics, agriculture and pedagogy.¹

Compliance with these conditions meant an annual grant of \$500. During the first year of the program in 1911-1912, 40 high schools were designated as Normal Training High Schools. During the 1915-1916 school year a total of 3,500 pupils were enrolled in high school normal training courses.² Graduates

¹Iowa Department of Public Instruction Report, 1910-1912, p. 34.

²Iowa Department of Public Instruction Report, 1914-1916, p. xi.

of these programs constituted the main source of teachers for Iowa's rural schools.

At the turn of the century, attendance at county teachers institutes began to decline as college and university summer programs blossomed and increasingly began to attract large numbers of teachers.

Probably 3,500 of those who might have been enrolled in institutes were in summer schools in 1903, and the attendance in succeeding years compelled an arrangement whereby such attendance might be substituted for the usual county institute.¹

During the six week summer session of 1907, for example, the three state institutions of higher education alone enrolled a total of 7,112 students.²

In 1912 the Better Iowa Schools Commission recommended the abolishment of the county normal institute and the substitution of summer school for academic instruction. In addition, the commission recommended that teachers be required to attend short, county inspirational institutes to be established as needs demanded. Legislation to this effect was enacted by the Thirty-fifth General Assembly in 1913.

¹Aurner, 2: 184.

²Iowa Public Instruction Department Report, 1906-1908, p. 16. Since the first summer session at Iowa State College did not begin until 1911, the reference is to informal summer offerings at this institution.

Teacher education programs at the three state institutions of higher education continued to expand during the early twentieth century. The initiation of professional teacher preparation courses at Iowa State College raised anew the question of duplication of work at Iowa State College, the State Teachers College and the State University of Iowa.¹

Teacher certification

Agitation to improve teacher certification which had commenced in the nineteenth century continued to grow. The culmination came in 1906 with passage by the Thirty-first General Assembly of the Uniform County Certificate Act. This legislation transferred the licensing of all teachers from county authority to state authority. Although county superintendents retained procedural authority with respect to conducting examinations and judging character, all results were sent to the state board of educational examiners for grading and final judgment.

In the following year, 1907, the Thirty-second General Assembly enacted a bill which gave the state board of educational examiners (initially established in 1861), the power to grant state certificates to graduates of the State Normal School, the State University, and the State College of

¹A full discussion of this matter is found in pages 147 to 152 of this investigation.

Agriculture and the Mechanic Arts. This constituted the first formal recognition of Iowa State as a teacher preparation institution. Graduates of other colleges and normal schools could likewise be certificated providing that their institutions maintained courses judged to be of equal rank with those of the three state institutions.

Based on recommendations of the Better Iowa Schools Commission, 1911-1912, the Thirty-fifth General Assembly in 1913 passed legislation which affected both teaching and teacher certification. Among these were:

- (1) placing the supervision of normal training in the high schools under the state superintendent, authorizing the certification of graduates of such approved courses, and making appropriations of state funds for the subsidation of such courses;
- (2) requiring all applicants for teachers' certificates after July 1, 1915, to have twelve weeks of normal training in an institution approved for such purpose;
- (3) requiring the teaching of elementary agriculture, domestic science and manual training in all public schools after July 1, 1915.¹

Iowa State College: The Early Professional
Years, 1900-1917

Consistent with developments in other land-grant colleges, the period from 1900 to 1917 provided evidence of a rapidly

¹Laws of Iowa, 35 G.A., 1913, quoted in Hart, p. 166.

growing interest in teacher education at Iowa State College.¹ A number of new courses in psychology were initiated which pertained directly to teacher preparation. In 1901, two courses--Educational Psychology and the Theory and Practice of Teaching Domestic Science--shared the distinction of becoming the first, professional, teacher preparation courses to be offered at Iowa State. Within the field of agriculture, Iowa State early became an acknowledged leader and developed one of the first collegiate programs in both agricultural education (1904) and agricultural extension (1907). In 1911 Iowa State College initiated a summer program. In addition, other teacher preparation courses were introduced in various departments of the College such as agricultural engineering, literature, music, and physical training.

By 1917 it was clear that Iowa State College, in response to growing demands, had clearly embarked upon a course of teacher preparation in numerous areas. In that same year, however, the Iowa State Board of Education formally expressed concern regarding the duplication of teacher preparation courses among the three state institutions of higher education. While limitations were recommended by the board in the areas of psychology and education, Iowa State College was encouraged

¹Ashley V. Storm, How the Land-Grant Colleges Are Preparing Special Teachers of Agriculture (Nashville, TN: George Peabody College for Teachers, 1919), p. 27.

to continue teacher preparation programs, at least temporarily, in agriculture, home economics, and manual training and to institute new programs for the preparation of trade and industrial school teachers.

Psychology and history

The Department of Philosophy, headed by Professor Orange Howard Cessna, offered three education-related courses in psychology from 1901 to 1904--Psychology, Ethics and Educational Psychology. Psychology, Course I, was the basic, (survey-type) course which continued to be taught, although the extent to which it was directed toward teacher education during these years is unclear. It was "an optional course of elements and outlines of psychology," which was offered during the first term of the senior year to all students enrolled in the College.¹ The undergraduate teacher preparation courses in psychology and the years each was offered from 1901 to 1917 are shown in Table 2.

Ethics, also an optional course, was offered during the second term of the senior year to all students. The rationale for such a course was explicit. "All callings and pursuits of life are based upon some moral obligation," and the purpose of Ethics, therefore, was to give the student "a comprehensive acquaintance with the principles and the duties of a faithful

¹Iowa State College Catalogue, 1901-1902, p. 263.

Table 2. Undergraduate teacher preparation courses in psychology, 1901-1917^a

No.	Course Name	Year															
		1901-02	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17
1	Psychology	X*	X	X	X	X	X	X	X								
2	Ethics	X	X	X	X	X	X	X	X	X	X	X	X**	X	X	X	X
3***	Educational Psychology	X	X	X	X			X	X							X	X
4#	Educational History & Methods				X											X	X
3	Advanced Psychology						X	X	X	X	X						
1##	Descriptive Psychology								X	X	X	X	X				
5,6	Principles of Education & Child Study								X								
4	Essentials in Psychology									X	X	X	X	X	X	X	X
5	Psychological Principles of Education								X	X							
6	Child Psychology								X	X							
9	General Methods of Education								X	X							
6	Psychology of Childhood & Adolescence									X	X	X	X	X	X	X	X
7	Outlines of Psychology										X	X	X	X	X	X	X
12	Physical & Mental Tests													X	X	X	X

^aPrior to 1904, the courses in Psychology and Ethics were offered by the Department of Philosophy.

*X--Year course offered. In all corresponding tables this letter will denote year course offered.

**X--Year course designated as counting toward state teacher certification. In all corresponding tables this letter underlined will denote year course designated as counting toward state teacher certification.

***Educational Psychology was #4 in 1908 and 1909 and #8 in 1915.

#Educational history was taught in the History Department from 1908 to 1913 and in the Agricultural Education Department from 1913 to 1917.

##Descriptive Psychology was #7 and #8 from 1910 to 1914.

life and good citizenship."¹

Educational Psychology, the third course in the trilogy, aimed "to make a study of the elements of psychology . . . which underlie the educational processes and of the psychological laws which lead to rational methods of instruction."² The course content during the second term of Educational Psychology concentrated on an outline of both the history and the philosophy of education.³ This course represented one of the two earliest professional teacher preparation courses offered at Iowa State. Unlike Psychology and Ethics, however, Educational Psychology was specifically designed for students who were enrolled in the Two-Year Course in Domestic Science. This course was designed to

. . . meet the demands for teachers thoroughly trained in Domestic Science and Domestic Art both on the theoretical and practical sides, and capable of conducting classes and organizing courses of study.⁴

¹Ibid.

²Ibid.

³The history of education was not an entirely new subject in Iowa State's program. In 1887, the Department of Psychology, History of Civilization, and Rhetoric offered instruction which attempted "to give a clear, yet concise, history of the origin and growth of government, religion, science, language, education, industry and mechanic arts." Iowa State Agricultural College and Farm, Twelfth Biennial Report to the Board of Trustees (Des Moines: State Printer, 1887), p. 87.

⁴Iowa State College Catalogue, 1901-1902, p. 263.

Those completing the course received the Domestic Science Diploma.

In 1904 the newly formed Department of Psychology continued to offer Psychology, Ethics, and Educational Psychology and also offered a new course, Educational History and Methods. This new course not only provided an outline of the history of education, but also included additional treatment of teaching methods. This course, too, was apparently only for students enrolled in the Two-Year Course in Domestic Science and was offered during the second year of the program.¹

During the years 1905 and 1906, the courses in educational psychology and educational history were dropped from the departmental offerings, and only Psychology and Ethics were offered. It was during these years that the least number of educational courses were offered at the College. In 1907, Advanced Psychology, Course III, was introduced into the curriculum. This course was simply an extension of the first course in psychology, and it was offered through 1911.

With reference to educational history, the history department in 1908 initiated a one semester course entitled History of Education which, in 1909, became a two semester course. In 1910 the course received the broader title of History of General and Industrial Education. During 1911-1912, both the

¹Iowa State College Catalogue, 1904, p. 284.

Department of History and the Department of Agricultural Education offered similar two semester courses in educational history. By 1913, however, the history department dropped this course and educational history was taught only in the Department of Agricultural Education.

Educational Psychology was reinstated in the departmental offerings during the years 1908 and 1909. Its reappearance was "especially arranged for the Domestic Economy students." The aim of the course was to present "practical psychological problems of teaching, and was based on the texts, James's Talks to Teachers and Betts's The Mind and its Education.¹

Between 1906 and 1909, the psychology department's descriptive subtitle, in the Catalogue, "Courses in Psychology." In 1909, when the department expanded its curricula to six courses, the greatest number of courses offered to date, it incorporated in its subtitle, along with Psychology, Principles of Education and Child Study. Two new courses were introduced in 1909. Descriptive Psychology, a general course, basically replaced Psychology, Course I, and Principles of Education and Child Study which dealt primarily with the psychological principles of education. According to the state board of education report, it was during the years 1908 to 1910 that Iowa State

¹Iowa State College Catalogue, 1908-1909, p. 270.

. . . added most of the professional work in education required by students who wish to secure the five-year teacher's certificate upon graduation from the College. There have been forty-five or fifty students each semester who desired this work. There have been about five hundred students classified for work in the Department each semester.¹

Further expansion within the department occurred in 1910 with the addition of several courses: Essentials in Psychology, which covered the main facts of psychology, but not in the depth required for state teacher certification; Psychological Principles of Education, which among other sources used as a basic text, Thorndike's Principles of Teaching; Child Psychology, which stressed such areas as characteristics of childhood and processes of mental changes during the adolescent period; and, General Methods of Education, which included such topics as "the chief aim of education, interest, correlation, induction, the will, the individual notion and the general notion of education."² But both Psychological Principles of Education and General Methods of Education were dropped in 1912. In 1911, although the course content remained the same, Child Psychology was given the more descriptive title of Psychology of Childhood and Adolescence. In 1913 Outlines of Psychology replaced Descriptive Psychology as the basic

¹Iowa State Board of Education, First Biennial Report to the Governor and the Thirty-fifth General Assembly (Des Moines: State Printer, 1910), pp. 221-222.

²Iowa State College Catalogue, 1910-1911, p. 311.

introductory course and remained as such through 1916.

A course entitled Physical and Mental Tests was introduced in 1915 and was "designed particularly for those who expect to teach."¹ The course covered the purposes and development of various tests as well as the treatment, results, and conclusions of obtained data. This course was short-lived, however, and was deleted after 1916. Also, in 1915, Educational Psychology, which had not been taught between 1910 and 1915, was readopted.

From 1900 through 1916 all of the courses in psychology were apparently taught by two professors. Orange Howard Cessna, Professor of both History and Psychology, singularly taught all the psychology courses until 1914 when he was joined by Thomas Franklin Vance, Assistant Professor of Psychology.

O. H. Cessna and his family had come to Nevada, Iowa in 1856 by covered wagon from Ohio. After attending school in Nevada, he enrolled in the first class at Iowa State at the the age of sixteen. Some years later, Cessna recalled his trip to Ames and reflected upon his initial feelings about College.

There were two important events connected with my trip to college in the fall of '68 The first was my leaving mother on the front porch--crying because her boy was going 11 miles from home. And then when we had made the long wagon journey over the muddy roads to Ames, with

¹Iowa State College Catalogue, 1915-1916, p. 283.

my old trunk tied up with ropes jolding [sic] along in the back, came the second important event: Father went home and left me at the college all alone. Just when I was 16 years, two months, 21 days, 14 hours, 15 minutes, and 16½ seconds, old comparatively speaking, of course.

[I was assigned] . . . a very small room with a bed, two chairs, and a white wash bowl and pitcher. Each man had his own tick which he filled with straw from the barn.

I sat down in my room, feeling bluer than indigo. I didn't want education; I wanted home and mother. First I was afraid I'd die, then I was afraid I wouldn't die. That evening I walked out onto the lonely campus; I looked up and saw the big dipper in the sky. Why, I said to myself, that's the same big dipper that shines away off in Nevada; it shows that I can't be so far away. And then I thought of something that mother had told me before I left: Remember son, God can be with you in Ames just as well as in Nevada. I have had a warm place in my heart for the big dipper ever since.¹

Like numerous other students, Cessna taught during the College's long winter vacation in order to help pay for his education. Most probably, he studied under Adonijah Welch. For several years after graduation in 1872, Cessna worked in noneducative capacities and then, in 1878, entered Garrett Biblical Institute at Evanston, Illinois from which he received the degree of Doctor of Divinity in 1885. He served several pastorships before returning to his alma mater in 1900 as head of the history and psychology departments as well as college

¹Iowa State College Student, 26 April 1932, p. 108.

chaplain. He died in his eightieth year on October 22, 1932, while at work on his "Chaplain's Corner" column for the campus newspaper, the Student.¹

Home economics

Although domestic economy had been an integral part of Iowa State's program since the opening days of the College, it was not until 1901 that the first professional education course was offered. From the beginning, the young ladies enrolled at the College fulfilled their manual labor requirements by working in the College's kitchen, bakery, and dining room. Mary Beaumont Welch, wife of Iowa State's first president, Adonijah Welch, showed an early interest in and support of the young ladies work. She reportedly began teaching cooking in her own kitchen. Her strong interest coupled with her informal instruction led, in 1875, to the establishment of the Department of Domestic Economy and her appointment as instructor. Although its primary purpose throughout the nineteenth century was the preparation of homemakers rather than teachers, the department was establishing a firm foundation for teacher preparation programs of the twentieth century. Work in the kitchen, bakery, and dining room continued, and

¹Iowa State College Student, 25 October 1932, p. 3; The Alumnus, November 1932, O. H. Cessna File, Psychology, AD-18, Folder No. 1-3, Iowa State University Special Collections, Ames, Iowa.

Mary Welch also offered a series of lectures in domestic economy. Work in laundering and sewing were subsequently added to the program, and in 1877 the first experimental kitchen established in any college was opened at Iowa State.

In the latter two decades of the nineteenth century Domestic Economy continued to grow slowly under the leadership of Emma Pike Ewing (1884-1888), Eliza Owens (1888-1896), and Gertrude Coburn (1896-1900).

Between 1885 and 1900 the enrollment of women fluctuated between 29 and 73 in one peak year, 1898. Most frequently it was in the fifties. Graduates ranged from 5 to 14; after 1892 the number stabilized at 12 to 14.¹

The College Catalogue for 1901-1902 notes the first professional teacher education course at Iowa State in domestic economy under the leadership of Professor Mary A. Sabin. The introduction of Courses IX and X, Theory and Practice of Teaching Domestic Economy, exposed the student to the "methods of teaching Domestic Science and Domestic Art, [and] the conducting of classes."² The undergraduate teacher preparation courses in home economics and the years each was offered from 1901 to 1917 are shown in Table 3.

¹Ercel S. Eppright and Elizabeth S. Ferguson, *A Century of Home Economics at Iowa State University* (Ames, Iowa: Iowa State University, 1971), p. 41.

²Iowa State College, *Catalogue, 1901-1902*, p. 262.

Table 3. Undergraduate teacher preparation courses in home economics, 1901-1917

No.	Course Name	Year															
		1901-02	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15	1915-16	1916-17
9,10	Theory and Practice of Teaching Domestic Economy*	X	X	X	X	X	X	X	X	X	X	X					
33,34	School Methods							X									
14,32	Theory of Teaching Domestic Art							X	X	X	X	X					
9,10	Theory and Practice of Teaching Home Economics												X	X	X	X	
20,21	Training in Teaching Home Economics																X

*The title of this course changed during the years 1901 to 1912 in accordance with department nomenclature, but content remained basically the same.

A single course, however, was not enough in Miss Sabin's far-reaching plans to further the preparation of teachers in domestic economy. Reporting to President William Beardshear in 1901-1902 she noted the need to plan for the future.

There is a demand today in the West for a teachers' course in Domestic Science. No thorough teachers' course is given West of Philadelphia or New York City. To meet this demand the Iowa State College offers a two-year course in Domestic Science beginning with the fall of 1902.

According to the trend in modern education, elementary domestic economy will eventually find place in the public school. This means a demand for teachers and our aim is to supply, in part, this demand. The present is our opportunity The growth of the teachers' course will be very gradual, as the work is to be incorporated in the public school courses very gradually, but we must plan for the future by laying good foundations in the present.¹

From 1901 through 1903, the Department of Domestic Economy offered the Two-Year Course in Domestic Science. This course aimed to

. . . meet the demands for teachers thoroughly trained in Domestic Science and Domestic Art both on the theoretical and practical sides, and capable of conducting classes and organizing courses of study.²

Students who satisfactorily completed the Two-Year Course received the Domestic Science Diploma.

¹Eppright and Ferguson, p. 79.

²Iowa State College, Catalogue, 1902-1903, p. 260.

During the years immediately following 1900 the Department of Domestic Economy underwent several changes in program. From 1901 through 1904 the theory and practice of teaching course remained unchanged and was offered in Domestic Economy's sub-division, Domestic Art. In 1904, the Department of Domestic Economy became known as the Department of Domestic Science. In 1905, Courses IX and X were offered under the sub-division, Domestic Science, where they remained through 1915. According to Professor Georgetta Witter, head of the Department of Domestic Science, the switch logically occurred because, as she stated, "Domestic Science is designed to prepare teachers of Domestic Science."¹ Also, during this year, the two-year normal course in Domestic Science was dropped, and a more scientific four-year program was instituted leading to the degree of Bachelor of Domestic Science.

Miss Sabin's prophesy regarding the gradual growth of domestic economy in the public schools proved to be accurate. Although the first high school department of home economics was established in Davenport, Iowa in 1888, no other high school domestic science departments were established until the twentieth century. By 1907, 21 schools were offering needlework, and six schools were offering kitchen and dining room

¹Iowa State College, Catalogue, 1902-1903, p. 260.

work.¹ By 1911, 94 schools were offering needlework, while 47 offered kitchen and dining room work.² As previously noted, the Thirty-fifth General Assembly of Iowa in 1913 emphasized the new importance being attached to the practical arts by passing legislation requiring the teaching of agriculture, domestic science and manual training in all the public schools of the state after July 15, 1915.

Records are also available which indicate the specific institutions where Iowa's domestic science supervisors were trained during the years 1907 to 1917. In 1907, the first year for which such records are available, not one of the five women supervisors had received her training at any one of the three state institutions of higher learning. The work at Ames High School, however, was being supervised by Iowa State College.³ By 1911 the records show involvement by all three state institutions of higher learning. Out of a total of 47 domestic science supervisors in Iowa, seven (14.9%) had received all or part of their training at Iowa State College, seven (14.9%) at Iowa State Teachers College, and two (4.3%) at The State University of Iowa.⁴ Comparable figures for 1916

¹Iowa Educational Directory, 1907-1908, pp. 49-50.

²Iowa Educational Directory, 1911-1912, pp. 72-73, 75.

³Iowa Educational Directory, 1907-1908, p. 49.

⁴Iowa Educational Directory, 1911-1912, p. 76.

include a total of 622 domestic science supervisors. Of this total, 105 (16.9%) received all or part of their training at Iowa State College, 120 (19.3%) at Iowa State Teachers College, and 20 (3.2%) at The State University of Iowa.¹ It is apparent from these figures that both Iowa State College and Iowa State Teachers College were preparing an increasing percentage of the state's domestic science supervisors, while the percentage of those trained at The State University of Iowa had decreased slightly.

In 1906 the Department of Domestic Science once again became known as the Department of Domestic Economy with two subdivisions, entitled Domestic Science and Domestic Art. Additional strengthening of the amount of course work within the Department of Domestic Economy occurred in 1907, under Professor Witter's direction, with the inclusion of School Methods XXXIII and XXXIV in the Domestic Science program and Theory of Teaching Domestic Art XIV and XXXII in the Domestic Art curriculum. School Methods consisted of a "course of lectures dealing with prominent educators and their relation

¹Iowa Educational Directory, 1917-1918, pp. 98-104.

to industrial work in our public schools."¹

The only evident change occurring in the department between 1908 and 1910 was a change in department personnel. In 1908 Professor Alice Dynes Feuling replaced Professor Witter as head of the department.

Department of home economics In 1911 the department, heretofore known as that of either domestic economy or domestic science, became known as the Department of Home Economics. Professor Virgilia Purmont, who after one year would be replaced by Catherine J. MacKay, was designated as the first head of the Department of Home Economics. In May, 1911, a new home economics building² was completed at a cost of approximately \$75,000, and in 1911-1912 home economics was transferred from

¹Iowa State College Catalogue, 1907-1908, p. 266. School Methods, offered only during 1907-1908 in Home Economics, constituted the first professional methods course offered at Iowa State. The available records do not indicate any methods course for the 1908 academic year. In 1909, two courses in methods of teaching were offered by the Department of Civics. One course was entitled School Supervision, and the other, Educational Legislation, School Management and Administration. Both were electives for all programs at Iowa State. In 1910 methods in teaching was offered as a one semester course. This course was entitled Secondary Schools, School Management and Administration and was offered only from 1910 through 1912, apparently in addition to other methods courses being offered in agricultural education. From 1912 to 1917 all methods courses were offered by the Department of Agricultural Education.

²Presently MacKay Hall.

the Division of Science to the Division of Agriculture. In 1913, however, home economics became an independent division of the College.

The Catalogue for 1911-1912 notes that the thrust of the home economics program at Iowa State at this time was two-fold. "The object of the course is first to teach the proper administration of the home, and with it, to prepare all students who desire to teach the subject of Home Economics."¹

In 1912 Domestic Art 14 and 32, Theory and Practice of Teaching Domestic Art, were deleted from the course offering list. Domestic Science 9 and 10 continued to be offered under a new title, Theory and Practice of Teaching Home Economics, until 1916 when these courses were newly designated as Home Economics 21 and 22, Training in Teaching Home Economics.² These courses were exactly the same as Agricultural Education 21 and 22 offered by the Department of Agricultural Education.

Agricultural education

The Division of Agriculture under the leadership of Charles F. Curtiss developed rapidly during the years 1900 to 1917. Under his direction one of the first departments of agricultural extension was developed, and one of the first departments of agricultural education was founded. A graduate

¹Iowa State College Catalogue, 1912-1913, p. 134.

²Iowa State College Catalogue, 1916-1917, p. 230.

of Iowa State's class of 1887, and recognized as an outstanding agricultural leader in the state and nation, Curtiss came to Ames in 1891 with President Beardshear and James (Tama Jim) Wilson "to give the state a useful, representative agricultural college."¹ In 1900 he became Dean of Agriculture and Director of the Experiment Station and held both positions until 1933--"longer than any one man, save one, has headed research, teaching and extension in this country."²

In 1904 the Division of Agriculture established a new four year program of study entitled Science and Agriculture. As early as 1901 President Beardshear had suggested the need for such a program. "There is probably no more frequent demand for well-educated and up-to-date men as teachers than in scientific agriculture."³

At this time, the industry of agriculture was entering one of the periods of rapid development and, in Iowa and other farming states, the study of agriculture was being introduced in the schools. The incorporation of such a program at Iowa State College provides a clear example of the College's direct

¹Charles L. Burlingham, One Man's Work, 10 June 1934, Charles F. Curtiss Papers, AA-1, Folder No. 1-5, Iowa State University Special Collections, Ames, Iowa.

²Ibid.

³Iowa State College of Agriculture and the Mechanic Arts, Nineteenth Biennial Report to the Governor of Iowa (Des Moines: State Printer, 1901), p. 13.

response to the needs of Iowans and society as a whole. In establishing a new course, Iowa State was quite obviously looking ahead. "There will doubtless arise a large demand for strong, broadly educated, well trained teachers for this and other kinds of agricultural instruction in public and preparatory schools."¹ President Storms noted that the course was "designed especially to meet the needs of those who may wish to prepare to teach agriculture in the public schools and academies."² The Science and Agriculture program was developed, therefore, to meet the demands for instructional programs in agriculture presently established and expected to increase in both private and public secondary schools.

About 1905 Charles F. Curtiss in an address delivered to the State Agricultural Convention noted,

We have received more calls at Ames during the past twelve months for agricultural graduates to teach agriculture in the secondary schools than for all other lines of work combined, barring one--the management of farms--and more even than for that one. The agricultural colleges are establishing courses to train teachers for this field, and the demand promises to be an overwhelming one for years to come. Unfortunately, nearly all of the competent men trained for this work at Ames are now being taken to other states.³

¹Iowa State College Catalogue, 1904, p. 110.

²A. B. Storms to C. F. Curtiss, 25 November 1905, C. F. Curtiss Papers, Iowa State University Special Collections, Ames, Iowa.

³The Alumnus, February, circa 1905, p. 7, C. F. Curtiss Papers, AA-1, Folder No. 1-5, Iowa State University Special Collections, Ames, Iowa.

It is important to note that the College's early years of formal extension work bore a direct relationship to the growth of agricultural education in the secondary school. Informally, extension work had been carried on since the College's earliest days. President Welch had organized and conducted farmers institutes during 1870-1871, and his wife, Mary B. Welch, had delivered a series of domestic science lectures in Des Moines, Iowa, in 1883.¹ Extension work continued and was gradually strengthened and enlarged. In addition to their teaching responsibilities on campus, Iowa State College professors were conducting teachers institutes, farmers institutes, and short courses throughout the state. Recognizing the tremendous demands made upon the College faculty, the "Thirty-first General Assembly of Iowa passed a bill on April 10, 1906, establishing the Agricultural Extension Department of the Iowa State College and appropriated \$15,000 to cover the annual period from July 1, 1906 to July 1, 1907."² The first reference to the formal establishment of agricultural extension work is contained in the College Catalogue for 1907-1908. Referring to the value of this work, President A. B. Storms noted,

¹An Historical Sketch of the Iowa State College, L. H. Pammel Collection, p. 22.

²Ibid., p. 14.

The extension work has not only been of very great immediate service to the agricultural interests of the state, but it has stimulated a widespread and deeper interest in the subject of secondary agricultural education.¹

The mounting interest of Iowa State College in providing well-qualified secondary school teachers in both agriculture and home economics was evidenced in the gradual expansion of professional education courses. In 1909 a more exacting professional program was offered through the Science and Agriculture course for those students who sought teaching as a life's vocation. This was accomplished by providing two alternative programs of study for students in their junior and senior years. For example, those students who chose Group I took General Psychology, History of Education, Actual Government, Principles of Education and Methods of Teaching. The distinct advantage in choosing this particular program was the acquisition of the five-year state teacher's certificate upon graduation, without taking the otherwise prescribed written examination. Those who chose not to take the prescribed education program elected courses from other agricultural areas and, therefore, were not preparing for a career in education. This early and concentrated thrust toward the

¹Iowa State College of Agriculture and Mechanic Arts, Twenty-third Biennial Report to the Governor of Iowa (Des Moines: State Printer, 1908), p. 66.

promotion of agricultural education caught the attention of the state board of education, which observed that "in the field of agricultural education the Iowa institution is perhaps without a peer in the country. Certainly there is no institution outranking it."¹

In 1910 Dean Curtiss spoke of the growing national trend of introducing agriculture into the secondary schools and noted that the agricultural colleges were the only properly equipped and designed institutions to train teachers for this work.

During the past two years we have had a larger demand for graduates to enter this field than for any other single line of work. The technical agricultural courses which we are now offering do not fully meet this demand. . . . To train teachers, work in agricultural education should be especially adapted to meet the needs of young men and women who wish to make agricultural education their life work.²

Department of agricultural education In 1911 under the direction of Professor Ashley Van Storm, a newly-created Department of Agricultural Education surfaced and replaced the existing program in Science and Agriculture. While course content and educational objectives remained similar, two major differences appeared. First, the newly created department had

¹Iowa State Board of Education, First Biennial Report to the Governor and the Thirty-fifth General Assembly (Des Moines: State Printer, 1910), pp. 14-15.

²Ibid., pp. 228-229.

a designated head to coordinate the program. Secondly, the department adopted and implemented five new professional education courses within the teacher education sequence. These courses were offered solely by the agricultural education department above and beyond those educational courses offered by other departments. These courses included: General Principles of Teaching; Principles of Secondary Education; Educational History; General Methods; and Special Methods.¹ The undergraduate teacher preparation courses in agricultural education and the years each was offered from 1911 to 1917 are shown in Table 4. The addition of these courses, therefore, clearly reflected a growing interest on the part of the College to provide teacher education, since no attempt was made to displace existing programs. A student could obtain certification by accumulating a minimum of twenty credit hours from either the psychology department or the agricultural education department during the junior and senior years.

There is little doubt that the Department of Agricultural Education received the sound foundation necessary for growth and development under its first head, Ashley Van Storm. Professor Storm not only realized the great demand for trained teachers in agriculture, but he took the initiative in filling this need by developing a core of professional education

¹Iowa State College Catalogue, 1911-1912, p. 128.

Table 4. Undergraduate teacher preparation courses in agricultural education, 1911-1917^a

No.	Course Name	Year					
		1911-12	1912-13	1913-14	1914-15	1915-16	1916-17
1,2	General Principles of Teaching	X	X	X	X	X	
3,4	Principles of Secondary Education	X	X	X	X	X	
5,6	Educational History	X	X	X	X	X	X
7	General Methods	X	X				
8	Special Methods	X	X				
9,10	School Administration			X	X	X	X
1,2	Methods and Practice Teaching			X	X	X	
7	Vocational Education					X	X
20	Research in Education					X	X
1	Methods of Teaching						X
2	Principles of Education						X
3	Development of the Industrial High School						X
4	The Present Day High School						X
21,22	Training in Teaching Home Economics						X
32,33	Training in Teaching Agriculture						X

^aPrior to 1911, no teacher preparation courses were offered by the Department of Agriculture. Students in the Science and Agriculture curriculum, who were preparing to teach, elected teacher preparation courses in the Departments of Psychology, History, Home Economics and Civics.

courses specifically designed to enhance teaching skills in the sciences and industries. In 1913, A. V. Storm left Ames to become professor and head of the newly created agricultural education department at the University of Minnesota. A testimonial to Storm's reputation was issued by Dean Wood of the University of Minnesota. "Professor Storm has long been recognized as a leader in agricultural education. He combines excellent training with wide experience."¹

In 1913 Dean Curtiss, in selecting Storm's successor, upheld Iowa State's tradition of attracting men of intellectual quality with leadership ability and vision. Guy M. Wilson was chosen to replace Ashley Storm as professor and head of the agricultural education department. Under Wilson's direction the department continued to broaden its course offerings and also increased its instructional staff. Additional course work in school administration was designed specifically for the preparation of those seeking a principalship or a superintendency.² Likewise, there was a strengthening of both the special methods courses and practice teaching. One of the foremost strides within the department at this time was the addition of practice teaching experiences at Ames High School.

¹St. Paul Sunday Pioneer and St. Paul Sunday Dispatch, 21 July 1912, A. V. Storm Papers, AA-13, Folder No. P-1, Iowa State University Special Collections, Ames, Iowa.

²Iowa State College Catalogue, 1913-1914, p. 142.

A course in practice teaching is being offered for the first time this year to the men of the agricultural division of the college. The work in agriculture at Ames High School is being carried on by the members of the class, each of whom has charge of the work for two consecutive weeks, under the supervision of the department of agricultural education. This includes one recitation daily and two double laboratory periods each week.

A plan for the teaching conforming to the general course of study outlined by Professor G. M. Wilson, head of the department, is first submitted for criticism. Detailed lesson plans are also prepared for each day.

Assistant Professor S. H. Dadisman supervises the teaching and attends all classes. Professor Wilson is there also one hour each day to criticize the work and offer suggestions as to how it shall be carried on.¹

It would appear that this additional educational course work, coupled with high-quality, technical agricultural instruction in both the classroom and practical experience in farm work, offered the student a sound program of professional preparation.

Recognition of the work in agricultural education at Iowa State reached beyond the borders of Iowa and the continental United States to foreign countries. An indication of the importance of the work at Iowa State appeared in the Iowa Educational Directory for 1914-1915, which indicated for the

¹Iowa State Student, 25 October 1914, p. 3.

first time the sources of preparation of the supervisors of agriculture in the public schools of the state.

Of 143 persons listed, the training of 112 was known. Of these 112, 52 had been trained at the State College; 11 at the State University; 7 at the State Teachers College; 14 at private Iowa colleges; and 28 at out-of-state institutions.¹

The fact that this program had gained national and international prominence is of little doubt when in 1914, for example, the department reported that "calls for teachers of agriculture came in from twenty-three states."² In 1915 twenty-eight states and three foreign countries requested Iowa State's graduates in both agriculture and home economics and, furthermore, according to the 1915-1916 Catalogue, "no student having teaching as a major interest was disappointed in securing a satisfactory position."³ Also in 1915 the student newspaper noted the growing importance of the department.

The Agricultural Education department is becoming of considerable importance because in many states it is necessary for teachers of agriculture to have had from sixteen to twenty hours of work along this line.

¹Herbert McNee Hamlin, "A Case Study of Teacher Training in a Separate Land-Grant College" (Ph.D. dissertation, University of Chicago, 1931), p. 61.

²Iowa State College Catalogue, 1914-1915, p. 52.

³Iowa State College Catalogue, 1915-1916, p. 93.

In the number of applications for position there are men from nearly every department in the college, athletes, debaters, girls from the 'heck' division and engineers are all anxious to try their hand at the teaching game.¹

During the period from 1900 to 1917, Iowa State College followed the trend of land-grant institutions in general in developing teacher education programs in agriculture. A study by A. V. Storm found that land-grant institutions favored organizing special teacher preparation programs in agriculture as a separate department within the college of agriculture and naming this department, agricultural education. Furthermore, the distribution of course work over several colleges of the land-grant institutions provided a depth and diversity of method, points of view, procedures, and systems of evaluation not possible under a narrower experience. Practice teaching facilities were found to equal or exceed those of teacher training institutions in general throughout the United States.²

Additional teacher education courses

In addition to the teacher preparation courses in the Departments of Psychology, Home Economics and Agricultural Education, a few other courses in various departments throughout the College were also offered to prospective teachers.

¹Iowa State College Student, 23 January 1915, p. 1.

²Storm, pp. 38-39, 54-55, 109.

Agricultural Engineering introduced a new course in 1909, which was designed, among other things, to prepare students as "teachers and instructors of Agricultural Engineering in agricultural colleges and teachers of practical mechanics in Agricultural High Schools."¹ The course continued throughout the period, although no professional teacher education course appeared in the program sequence during the years 1909 to 1917.

In 1914 the Department of Literature, which was incorporated into the Department of English in 1916, introduced a course entitled Reading for Children at Home and at School. This course remained unchanged through 1916 and focused primarily on

. . . lists of books accepted as juvenile classics, separated into groups for the various ages and grades, also into classes of books adjusted to different tastes and needs; . . . and, helps for parents and teachers not only in selecting the best or in choosing books to serve a given end, but also in learning how to present these books to children.²

By 1914 the Department of Economic Science had provided a means whereby their students--those majoring in applied economics and social science--could elect courses in other divisions of the College. This provided "an excellent opportunity to train specialists in important fields including teachers in college, high schools and secondary institutions

¹Iowa State College Catalogue, 1909-1910, p. 106.

²Iowa State College Catalogue, 1916-1917, p. 206.

of agriculture and the mechanic arts."¹ This five-year combination program led to a double degree--a B.S. in the Department of Applied Economics and Social Science and a B.S. in any other department of the Divisions of Agriculture, Home Economics, and Engineering.

Instruction in teacher preparation was also offered by the Department of Music in the Division of Science. Prior to 1909 academic instruction within the department emphasized the cultivation of musical appreciation. In 1909 the Department of Music offered a one-year Supervisor Music Course designed specifically for students who wanted to teach music in the public schools.² Included in this program was a specific methods course entitled Methods of Public School Music Teaching and Study of the Child Voice. In addition this program included a course in drawing.

In order that those taking this course should be useful in the school system it was deemed advisable to include a drawing course that would enable one to teach that branch in the public school, if necessary.³

A two semester course in descriptive psychology, which stressed the basic principles of education and child study, was added

¹Iowa State College Catalogue, 1914-1915, p. 177.

²Iowa State College Catalogue, 1909-1910, p. 330.

³Ibid. The drawing course consisted of several courses in mechanical drawing, which emphasized such topics as isometric drawing, sketching, lettering, and blueprint making.

in 1912, and by 1914 the one-year course was expanded into a two-year program, which required the prospective student to meet regular admission requirements prior to enrolling in the program. In addition, the program incorporated two specific methods courses--one for the lower grades and one for the upper grades. Other requirements included a course in psychology concentrating on childhood and adolescence, which replaced the two semester course in psychology, and a course in practice teaching.¹

After 1914 the Supervisor Music Course apparently was discontinued. No mention of this particular program is made through 1916 in the Catalogue nor in any other existing records which were examined.

At the same time that the music department was expanding, there was a recommendation on September 11, 1913, to organize The Department of Physical Training to "emphasize the subject matter of general physical training and education rather than just inter-collegiate athletics."²

In 1914 the Department of Physical Culture for Women introduced a course entitled Playground, which dealt with the nature, formation, and administration of play and provided for practical experience in the city schools through a requirement

¹Iowa State College Catalogue, 1914-1915, p. 362.

²Minutes of the Iowa State Board of Education, Vol. I, p. 515.

of practice teaching. Training in teaching Gymnasium Work and in Coaching Athletics was incorporated into the curriculum in 1916, along with expansion of the playground course, which now encompassed such areas as coaching baseball, the study of play and childhood, first aid, story telling, and the teaching of folk dancing. Women completing the course with an average of 85 percent and a satisfactory practice teaching experience received a first grade certificate.

Under the direction of Clyde Williams the Department of Physical Training for Men offered for the first time (in 1915) a course in Theory and Practice of Coaching. The establishment of this course was apparently in response to many requests

. . . for teachers in general and applied science who have had more or less physical training and work in athletics. Those who are preparing to teach may elect work specially adapted to their needs.¹

Summer sessions

Iowa State professors and administrators had expressed interest in establishing a summer session several years before the event actually took place. President A. B. Storms in his report for 1905-1906 recommended the opening of a summer session in 1907 and noted that "for a considerable time it has been quite evident to the College authorities that a summer

¹Iowa State College Catalogue, 1914-1915, p. 347.

session of the College should be held."¹ In 1910 Dean Curtiss spoke of the pressing need for a summer course in agriculture.

There are a large number of teachers who are interested in agricultural work and who wish to strengthen themselves for the introduction of agriculture and science work in the public schools. Such a course would supplement the training of many college graduates who are teaching and would enable them to be better prepared to take up the work of introducing agriculture in the public schools. It would also be of service to country pastors and rural Young Men's Christian Association workers who are endeavoring to solve the educational and social problems of rural communities.²

The summer program began at Iowa State College in June, 1911, with a two week session. The popular educational thrust at this time was a belief that the proper education of the child must include not only work or proficiency in the three R's, but also the elements of a practical education to fit him for life. With Iowa State's emphasis on the development of curricula in both agricultural and industrial education, it was quite natural for the college to provide additional educational opportunities in these fields. Although originally established to serve those men and women who were unable to attend Iowa State during the regular college year--ministers,

¹Twenty-second Report of the Iowa State College of Agriculture and Mechanic Arts to the Governor of Iowa, 1905-1906 (Des Moines: State Printer, 1907), pp. 21-22.

²First Biennial Report of the Iowa State Board of Education, to the Governor and the Thirty-fourth General Assembly, 1908-1910 (Des Moines: State Printer, 1910), pp. 228-29.

business and professional men and women and teachers--the summer program, from the beginning, primarily attracted Iowa's teachers and school administrators.

In order that Iowa State College serve the greatest number of Iowans, courses such as dairying, soils, horticulture, animal husbandry, household economics, and manual training were offered as well as "all subjects in which public school teachers take examinations for all classes of uniform county certificates."¹ With respect to agriculture, manual training, and household subjects, daily conferences were held which were

. . . devoted to plans of developing industrial work, methods of teaching, equipment, correlation with other school work, material, textbooks, courses of study and other subjects that will aid teachers to carry forward the work in their own schools.²

Ashley Van Storm, the first dean of the summer school³ supervised an open admissions policy with respect to all summer instruction in order to provide easy access to all those desirous of its services. This policy was continued under Guy M. Wilson who succeeded Storm in 1913. The majority of those in attendance, however, continued to be public elementary or secondary school teachers and school administrators--superintendents, principals, and supervisors.

¹Iowa State College Catalogue, 1911-1912, p. 363.

²Ibid.

³The terms summer session and summer school were used interchangeably at this time.

The summer program was a mushrooming success. During the first summer approximately 50 Iowa school administrators and teachers were in attendance. In 1912 the summer session was expanded to six weeks and attendance more than doubled. By 1914 summer enrollment at Iowa State had reached 618 students. Of this number, 80 percent were public school teachers representing 96 Iowa counties, 15 other states, and seven foreign countries.¹ In reference to the recently completed summer session of 1914 the student newspaper carried the following comment.

More than half of the summer school students were rural teachers who came to better prepare themselves to teach agriculture and the industrial subjects in their country [rural] schools. This was the largest attendance of rural teachers anywhere in the state. In addition 150 superintendents, principals and high school teachers also studied these subjects in order that they, too, might be able to comply with the new law which requires the teaching of agriculture in all rural schools and high schools after July 1, 1915.²

In 1915 the Iowa State Board of Education extended the summer session to two consecutive terms of approximately six weeks each. The student newspaper carried the following justification.

¹Iowa State College Catalogue, 1915-1916, pp. 348-49.

²Iowa State College Student, 11 September 1914, p. 1.

The demand for help in agriculture, home economics and manual training is so strong and the work done in previous summer sessions at Ames has been so acceptable that the offering of the 12 weeks' work for 1915 seems fully justified.¹

Attendance continued to increase, and during the years 1915 and 1916 enrollment exceeded 1000 students. The primary goal of the summer session throughout these early years to meet the needs of in-service teachers.

Summer course offerings were concentrated in three major areas: agriculture, home economics, and manual training. General courses in these areas originally catered to the needs of the rural and grade school teachers of Iowa by providing relevant course content and, also, by utilizing instructional equipment found in the rural school and simulating actual conditions. These general courses, which were of a brief and summary nature, were later also directed toward principals, superintendents, and high school teachers who, in order to comply with the state legislation of 1913, wished to temporarily teach any of these subjects in their high schools. Tuition was free and the courses were of sub-collegiate grade.

At the same time regular collegiate credit courses were offered to any and all of those enrolled who met the regular college admissions qualifications. Students who desired to teach agriculture, home economics, or manual training on a

¹Iowa State College Student, 4 December 1914, p. 3.

permanent basis were advised to take the standard college program of studies.

By 1917 the general courses, although retained for rural and grade teachers, were discontinued for high school teachers in response to the tendency of many superintendents and other school officials to require college credit work to meet the requirements for the teaching of agriculture, home economics, and manual training in the high school.

Perhaps one of the most innovative and stimulating aspects of the summer program, and one which most certainly was in keeping with Iowa State's motto of "Science with Practice," was the establishment of the model school. In a letter to the Iowa State Board of Education on March 10, 1913, President Pearson recommended "that authority be given to make provision for holding a one or two room demonstration or observation school in one of the College buildings during the summer session work."¹ This two room, consolidated, model school was supervised by critic teachers, and it provided a structure which students could observe a teacher utilizing or practicing the most recent and accepted educational methods. One room was apparently devoted to work in the first and third

¹Minutes of the Iowa State Board of Education, Vol. I, April 20, 1909 - April, 1914, p. 420. This recommendation was apparently put into effect. Although this school is first mentioned in the Catalogue for 1914-15, the Catalogue also states that the model school will be continued.

grades, while the other room was devoted to fifth and eighth grade work. The following passage described the work of the upper grades.

The work in the upper grades will place greater emphasis upon English, arithmetic physiology and geography and will also demonstrate the possibilities of work in home economics and agriculture. The rural school plan on home economics will be demonstrated three times each week. The work in agriculture will be correlated with the school plot at the college and the home project work being carried by the pupil.¹

Teacher certification and Iowa State College

Teacher certification, according to the legislation adopted by the Thirty-first General Assembly which became effective on October 1, 1907, could be obtained in a number of different ways by Iowa State students during the years from 1910 to 1917.² In order to obtain a five-year, first-grade state teacher's certificate³ during these years, without taking an examination, an Iowa State graduate was required to have completed six semester hours in psychology and fourteen semester hours in education.

¹Louis H. Pammel Papers, PPI. 28-1, circa 1911-19, pp. 3-4, Iowa State University Special Collections, Ames, Iowa.

²Prior to 1910 state teacher certification is mentioned only briefly in relation to psychology courses.

³Teaching certificate descriptions and requirements which became effective October 1, 1907, appear in Appendixes C and D.

The College consistently urged students who wished to teach to complete the requirements for first-grade certificates. Provisions were made, however, for those not meeting these requirements. Iowa State graduates having only six hours in psychology and four hours in methods of teaching were issued special uniform county certificates between 1910 and 1912. From 1912 to 1917 all Iowa State students who completed any four-year program were awarded special uniform county certificates. No specific requirements in either psychology or education were noted for these certificates in the Catalogues. Beginning in 1914 Iowa State graduates who had not completed all the prescribed twenty hours in education and psychology, were awarded third-grade state certificates.

In order to help meet the growing demand for teachers in agriculture, home economics, and manual training a special certification program was instituted between 1911 and 1914. Beginning in 1911 graduates of Iowa State College in home economics were eligible for special state certificates if their programs included six hours of psychology. A year later this program was extended to graduates of agriculture and engineering. In addition to the psychology requirement, engineering students were required to have completed a minimum of two hours of shop work. Home economics, agriculture, and manual training were the only areas for which special state certificates were issued, and a certificate could be obtained

for not more than two of these areas. In 1914 this program was apparently discontinued, and students interested in certification in these areas were awarded special uniform county certificates along with students in the following fields:

music; drawing, German; French; physical culture; rhetoric, English, composition, English and American literature; history and political science; algebra, geometry, trigonometry; physiology; geology; botany; ¹ zoology; physics; chemistry; and astronomy.

Duplication among the three state institutions of higher education

The three state institutions of higher education had developed competitively over the years, and rivalry existed with respect to a number of programs. Separate boards of trustees came to the legislature biennially for appropriations

. . . with more or less rivalry and necessarily with little understanding, so far as the legislature was concerned, of their respective needs and practically no knowledge at all as to ² the lines along which they were being developed.

An effort to coordinate the work of these institutions was first made in 1897 when the Healy Committee was appointed to "investigate the management of the charitable, penal, and

¹Iowa State College Catalogue, 1914-1915, p. 360.

²Minutes of the Iowa State Board of Education, Vol. VI, April 13, 1926 - November 4-5, 1927, p. 648, Resolution of the Forty-first General Assembly, Duplication Report to Governor John Hammill, June, 1926.

educational institutions of the State."¹ Subsequently, under legislation sponsored by Senator Whipple in 1909, a change in governing authority was effected, and the Iowa State Board of Education replaced each individual institution's board of trustees.

. . . The legislature finally, in what might be called sheer desperation, looked about for some method whereby these rivalries could be minimized and these institutions correlated. For this reason, and for this reason only, the Iowa State Board of Education was called into being.²

In the same year in accordance with the national trend, whereby normal schools were becoming teachers colleges, the State Normal School became known as the Iowa State Teachers College. Regarding this change the board of education noted that

this change was justified, for this institution can no longer be properly designated merely as a normal school It would perhaps be in order to say that it is a normal school and more--a college. It confers at least one collegiate degree. Its course leading to the degree of Bachelor of Arts in Education is to all intents and purposes a standard college course.³

¹The Carnegie Foundation for the Advancement of Teaching, Eighth Annual Report of the President and of the Treasurer (Boston: The Merrymount Press, 1913), p. 80.

²Minutes of the Iowa State Board of Education, Vol. VI, p. 648.

³Iowa State Board of Education, First Biennial Report, 1908-10, p. 17.

In July, 1913, President Pearson of Iowa State College and President Seerley of the State Teachers College proposed a student exchange between their two institutions apparently as an alternative to developing similar course strengths in each institution.

It seems highly desirable that such exchange as suggested should be arranged. For example, students at Cedar Falls desiring to prepare themselves for teachers' positions might wish to spend one-half or a whole year at Ames in order to get more agricultural work than it is feasible to provide at Cedar Falls. Similarly, students at Ames might profit by taking certain work at Cedar Falls.¹

Although the state board of education had been concerned with the question of duplication of programs among the three state institutions of higher education since 1909, it had become eminently clear by October, 1912, that the matter must be dealt with formally. Therefore, with regard to the coordination of programs and the avoidance of duplication at the three institutions, three important changes were adopted by the board to go into effect September, 1913:

1. The State Teachers College was to become a training place for elementary teachers.
2. All engineering instruction was to be given at the State College in Ames.
3. The course in home economics at Ames was to be transferred to the State University.²

¹Minutes of the Iowa State Board of Education, Vol. II, June 2, 1914 to July 6, 1917, p. 468.

²Ibid.

Opposition to the proposed changes formed quickly. The student newspaper at Iowa State speculated specifically on the effects of the last suggestion.

. . . It is an outrage to think of transporting our girls from this beautiful campus--here where they are off by themselves and enjoy the pure social conditions--and placing them on a crowded campus in town . . . , dormitories will have to be built and proper supervision be made.

But as I have said it is not the girls who are going to feel the change but the boys. With our girls gone, where will our social life go? The moral influence of the girls, if nothing else, should be considered in this change.¹

As a matter of fact, all three state institutions refused to accept the plan of coordination, and the matter came before the Thirty-fifth General Assembly.

When the legislature met the following January, [1913] organized bodies of alumni came to Des Moines and opposed the Board's scheme of coordination with all the power at their command.²

The opposition was successful and the board, in compliance with the request of the legislature, rescinded its proposals before they were ever put into effect. Clearly, this decision served only to encourage further development along previous lines.

¹Iowa State College Student, 14 May 1912, p. 8.

²The Carnegie Foundation, Eighth Annual Report, p. 82; Minutes of the Iowa State Board of Education, Vol. I, p. 397.

Shortly thereafter, noting the tendencies toward increasing duplication, the state board of education requested assistance from the United States Bureau of Education in determining less radical ways of avoiding duplication. The commission, assigned the responsibility of studying relationships among the institutions of higher learning in Iowa, issued its final report on March 17, 1916. In discussing the relationships of the three state institutions, the commission recommended adoption of the concept of "major and service lines" of work. Accordingly, each state institution should be assigned major fields to develop fully and such service lines as were essential to the cultivation of a major line. Duplication was deemed acceptable in service lines, but not in major lines. The following recommendations were made which were directly related to teacher preparation programs at Iowa State College.

1. The imposition of no external limitations upon the facilities offered at the three State institutions for giving work in home economics, agriculture and manual training until the present force of teachers in the State schools is equipped to meet the obligations imposed by the State law.

2. Thereafter, the delimitation of work in psychology and education at the State College to the amount requisite to meet the requirements of the first-class State certificate. (Advanced teacher preparation courses and courses for superintendents and supervisors were to be chiefly provided for at the State university).

3. The avoidance by the University of courses that duplicate the work offered at the State College of Agriculture and the Mechanic Arts in the preparation of high school teachers.

4. The provision of special courses for the preparation of trade and industrial school teachers at the State College of Agriculture and the Mechanic Arts.¹

The recommendations of the survey commission, despite the limitations suggested, were much more favorable to the development of teacher education at Iowa State than the earlier state board proposals, and President R. A. Pearson of Iowa State apparently accepted the policies as outlined by the commission.² Within a year, however, the Federal Vocational Act of 1917 was passed. This specific piece of legislation provided a strong impetus for the continued expansion of teacher preparation courses at Iowa State College during the succeeding years.

Summary

Between 1900 and 1917 the industrialization of America continued and was accompanied by new developments in transportation and communication, population growth, and urbanization. Federal participation in education was extended to teacher education under provisions of the Nelson Amendment in 1907.

¹Ibid., pp. 137-138.

²Ibid., p. 80.

Growth continued on all rungs of the educational ladder, and compulsory education was accepted in all states by 1918. On all levels, curricula increasingly reflected the changes in American life as greater emphasis was placed on the practical arts. Manual, industrial, and commercial courses appeared in secondary schools. In colleges and universities the influence of Dewey, James, and Thorndike led to the gradual replacement of courses in pedagogy by those of professional education. Normal schools began to be reorganized into teachers colleges, and additional opportunities for professional improvement were offered through teachers institutes and university summer programs.

Educational developments in Iowa generally reflected those occurring nationally. Compulsory attendance legislation for children between the ages of seven and fourteen was enacted in 1902, and the number of common schools continued to rise. The development of the urban public high school continued and public secondary schools began to be established in rural areas. By 1917 consolidation, which had begun in 1897, was well advanced. Manual arts was rapidly being introduced into the curriculum, and state legislation was passed requiring the teaching of agriculture, domestic science, and manual training in all the public schools of the state after July 15, 1915.

The chronic teacher shortage and the lack of adequate teacher preparation institutions continued into the twentieth century. Urgent calls for additional state normal schools continued to be ignored by the state legislature. The High School Normal Training Law of 1910 provided new opportunities for teacher preparation but did little to alleviate the overall problem. The growth of summer programs at colleges and universities led to the phasing out of county normal institutes.

By 1906 authority for teacher certification was wrested from the county and transferred to the state. A year later, the state legislature empowered the state board of educational examiners to grant certificates to graduates of the three state institutions of higher learning. This represented the first time that Iowa State College had received formal recognition as a teacher preparation institution.

In keeping with the growing interest of land-grant institutions in teacher education, Iowa State College, in 1901, introduced its first two professional teacher preparation courses--Educational Psychology and the Theory and Practice of Teaching Domestic Science. The establishment of a Department of Agricultural Education in 1911 followed the introduction of two of the nation's earliest programs in agricultural education (1904) and agricultural extension (1907). Several other departments also began to provide

courses for prospective teachers. Again, in 1911, a summer program was established which primarily catered to the needs of Iowa's secondary school teachers and administrators.

During the years from 1910 to 1917, a total of fourteen credits in education and six credits in psychology were required to secure a first class state teacher's certificate. The completion of any four-year program, however, entitled the graduate to a county certificate.

A movement fostered by the state legislature to coordinate the work of the three state institutions of higher learning culminated in the establishment of the Iowa State Board of Education in 1909 and the dissolution of the three independent boards of trustees. The new board subsequently studied the matter of duplication of work among the three state institutions, but its recommendations were rescinded before they were ever put into effect.

The matter of duplication was raised again in 1916 when the Iowa State Board of Education requested assistance from the U.S. Bureau of Education to study the problem. In addition to developing the concept of major and service lines of work to be developed at each institution, the commission assigned to study duplication made the following recommendations which applied to Iowa State College: (1) the limitation of work in psychology and education to that requisite for a first class state certificate; (2) the continuation of courses

in agriculture, home economics, and manual training to meet the demands for teachers; and, (3) the introduction of new courses to prepare trade and industrial school teachers.

The following time line summarizes major events in teacher education on the national scene, in Iowa, and at Iowa State College from 1900 to 1917.

MAJOR EVENTS -- TEACHER EDUCATION

TIME LINE
1900 - 1917

<u>National</u>	<u>Iowa</u>		<u>Iowa State College</u>
	Governor Shaw opposes chair of pedagogy at I.S.C.	1900	College calendar changed to begin school in September rather than March
		1901	First professional teacher education courses offered in educational psychology and domestic economy Two-year course in domestic science
	Compulsory school attendance legislation passed	1902	
		1903	
		1904	Four-year program in science and agriculture
		1905	
		1906	
The Nelson Amendment		1907	
		1908	
	Iowa State Board of Education established State Normal School becomes Iowa State Teachers College	1909	One-year Supervisor Music Course

Time Line 1900 - 1917 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa State College</u>
	State legislature passes High School Normal Training Law	1910
		1911 Department of Home Economics Department of Agricultural Education First summer session
		1912 Six-week summer session established
	State legislature abolishes county normal institutes	1913 Department of Home Economics becomes separate division
		1914 Five-year combined program in economic science Two-year Supervisor Music Course
	State legislation requires teaching agriculture, domestic science, and manual training in all public schools after July 15, 1915	1915 Two, six-week summer sessions established
U.S. Bureau of Education report on State Higher Educational Institutions of Iowa		1916



Adonijah S. Welch



William M. Beardshear



Mary B. Welch



William I. Chamberlain



Ashley V. Storm



Mary A. Sabin



Orange H. Cessna



Charles F. Curtiss



Adolph Shane



Guy M. Wilson



Cora B. Miller



John E. Evans



William H. Lancelot



Barton Morgan



Lydia Swanson



Florence A. Fallgatter



Lowell L. Carver



Clarence E. Bundy



Louis E. Menze



Barbara E. Forker



Glenn R. Hawkes



Marjorie S. Garfield



Ray J. Bryan



Virgil S. Lagomarcino

CHAPTER V
EDUCATION IN ECONOMIC PROSPERITY, DEPRESSION
AND RECOVERY, 1917-1941

The National Scene

Emerging from direct involvement in World War I and a post-war depression in 1921-1922, America enjoyed a period of great prosperity during the remainder of the 1920s. American industry continued to expand and it spread increasingly to the South and West. War had stimulated scientific and technical research, and the production of goods rose to extraordinary heights. Only the farmer, his foreign market in ruins from the war, failed to share in the economic boom.

In direct contrast, the collapse of the stock market, in 1929, ushered in a period of general economic depression. The optimism of the 1920s was supplanted by fear. Millions of Americans were without work as industry and agriculture came to a standstill. Franklin D. Roosevelt, elected to the presidency in 1932, sought to restore confidence in the nation and its economy through unprecedented expansion of governmental authority. By the late 1930s, Roosevelt's New Deal policies were beginning to provide effective solutions to national problems. And then, in 1941, the nation was again plunged into a major war.

The federal government and education

The lack of federal legislation to improve general education which had characterized the early twentieth century carried over into the 1920s and the 1930s. Federal inactivity was based on the dominant political view of the times that education was primarily a matter for state and local control. By 1936, however, the position of the Democrats had begun to change. They favored a platform supporting the role of the federal government in aiding youth through New Deal agencies such as the National Youth Administration and the Civilian Conservation Corps and in providing increased aid for vocational education and rehabilitation.

The major piece of education-related federal legislation enacted during this period (1917-1941) was specifically directed toward vocational education. Known as the Smith-Hughes Act of February 23, 1917, this bill appropriated a fund of \$7,150,122 for supporting vocational work in schools below collegiate grade.¹ It also created a Federal Board for Vocational Education and corresponding state boards to administer federal funds. According to its provisions, the federal government was to cooperate with the states in paying the salaries of teachers, supervisors, and directors of agricultural subjects; in paying the salaries of teachers of

¹C. F. Curtiss, *Some Foundations in Agricultural Education*, Collection Agricultural Deans, Box 1, Folder No. 1-7. p. 9, Iowa State University Special Collections, Ames, Iowa.

industrial subjects; and, in the preparation of teachers of agriculture, trade and industrial, and home economics subjects in public secondary schools. The George-Reed Act of 1929, the George-Ellzey Act of 1934, and the George-Deen Act of 1936--all led to the further expansion of services and funds for vocational education.

Elementary education

The state of the nation during the decades of the 1920s and 1930s was strongly reflected in American education. Elementary school enrollments continued to rise during the 1920s, although lower birth rates caused a drop in numbers in succeeding decades. The program was also expanding; kindergartens multiplied and nursery school programs began to appear. Curricula increasingly moved away from traditional, step-by-step learning from books toward concern for the individual child, purposeful activity, and well-rounded development of the whole child. By the 1930s the "activity movement," as advocated by John Dewey and William H. Kilpatrick, was gaining favor.

Secondary education

Secondary school enrollments showed marked increases throughout both the 1920s and the 1930s. Denied the opportunity to work, young people entered the high schools in record numbers. In 1919-1920, 32.3 percent of the population between 14 and 17 years of age was enrolled in secondary

schools. By 1929-1930 the percentage reached 51.4 and by 1939-1940 had risen to 73.3.¹ Plans of organization for the secondary school varied, but the junior high school concept remained popular.

The increasing feeling that the American high school should educate all American youth and should have as its primary purpose the preparation for life became crystallized in 1918 in the report of the Commission on the Reorganization of Secondary Education. Under the title, Cardinal Principles of Secondary Education, the commission proposed the following guiding principles to aid in the reorganization of subjects and curricula: health, command of the fundamental processes, worthy home membership, vocation, civic education, worthy use of leisure, and ethical character. To enhance the attainment of these aims, curricula should include constants (subjects required of all students), variables, and free electives. In response, academic and nonacademic subjects continued to multiply, and methods and standards were adopted to the capacities of increasing numbers of pupils who were attending the schools.

Higher education

Enrollments in institutions of higher education also rose during these decades and by the mid-1930s included

¹Good and Teller, p. 237.

approximately 1,260,000 students.¹ The junior college concept continued to gain favor, and by the beginning of the 1930s over 400 public and private junior colleges had been established; junior colleges served every state of the union except Nevada, Vermont, and Wyoming.² Curricula were responding to national changes. In light of the expansion of knowledge and the growing complexity of society, general education gained favor. To this end, integrated and broad-field courses appeared, and the major-minor system was introduced to avoid over-specialization.

Education of teachers

Facilities and programs for teacher education continued to improve. The evolution of normal schools into teachers colleges which had begun in the early twentieth century accelerated. For example, immediately following World War I, there were in the United States 46 teachers colleges and 137 normal schools.³ Only eight years later there were 137 teachers colleges and 69 normal schools.⁴ A study by Benjamin

¹Thayer, p. 295.

²Ibid., pp. 297-298.

³Benjamin W. Frazier, *Teacher Training, 1926-1928*, Bureau of Education Bulletin, No. 17 (Washington: Government Printing Office, 1929), p. 6.

⁴Brubacher, p. 485.

W. Frazier in the late nineteen twenties found that the growth in the number of schools, colleges, and equivalent major divisions of education constituted the outstanding tendency of the decade of the 1920s.¹

The movement toward the general upgrading of requirements and prerequisites for certification continued. By 1925 twenty-one states, of which Iowa was not one, required graduation from high school and some professional training for certification.² States also began to differentiate certification for elementary and secondary teachers. Increased professionalization of teaching and teacher preparation carried over into the 1930s. Questions were raised concerning the possibility of a year's internship for prospective teachers following formal course work. By the mid-thirties it was clear that teacher education institutions of all types must provide general and professional education courses and offer acceptable programs of student teaching. Despite progress, the supply of properly prepared teachers remained inadequate. By the beginning of World War II the majority of senior high school teachers were college graduates, while only a small number of elementary teachers held bachelor's degrees.

¹Frazier, p. 6.

²Tyack, p. 419.

Increased professionalization was also evident in the continuing decline of teachers institutes. Although still being conducted in some states, these institutes were rapidly being replaced by college summer school terms which continued to increase in numbers and popularity. Expansion in summer school programs, as well as the growth of extension and correspondence work offered by colleges and universities, provided opportunities for additional teacher preparation and in-service experiences.

Education in Iowa

A study of educational developments in Iowa during the 1920s and the 1930s reveals three major recurring themes: coping with the financial exigencies of the times; improving instruction, particularly at the elementary level; and, upgrading teacher preparation. Several factors eased the financial situation at different times. The standard rural school law of 1919 passed by the Thirty-eighth General Assembly represented the first time that money was ever sent back from the state treasury to the schools of the farmers of Iowa. Although this legislation provided some relief, calls for additional support for Iowa's public schools continued throughout the 1920s. Despite the serious financial strain of the early 1930s, the school situation in Iowa contrasted sharply with that of many other states. Through the concerted efforts

and sacrifices of teachers, boards of education, and the general public, Iowa was able to maintain all of her public elementary and secondary schools.¹ Some federal relief was also made available to Iowans during the Depression. On August 19, 1933, the federal emergency relief administration announced a program of work relief in education. Under this program,

. . . 742 teachers received financial assistance; 13,812 students enrolled in various classes maintained under this program, 37 different types of classes were offered and 7 schools were aided in maintaining a normal length school year.²

Elementary education

After a long period of rising enrollments, the number of elementary students in Iowa declined steadily throughout this period. This decrease was largely precipitated by a lower national birthrate. There was also a noticeable drop in the number of one-room elementary schools. Two factors were largely responsible; fewer children were living in rural areas, and some of these children were being bused to nearby graded schools. Closings ran as high as 100 per year in the depression years of the early 1930s.³ In 1918 Iowa had approximately 10,776 one-room schools, but by 1941 this number had

¹Iowa Department of Public Instruction Report, 1930-1932, p. 13.

²Iowa Department of Public Instruction Report, 1932-1934, p. 16.

³Iowa Department of Public Instruction Report, 1936-1938, p. 13.

decreased to 8,326.¹ Enrollment in kindergarten programs, however, continued to rise until about 1930. The number of students then declined slowly until 1935 when it began to rise again. By 1940-1941 the number of students enrolled in Iowa kindergartens totaled 18,716, a figure which exceeded the total for 1918 which was 17,811.

With regard to curriculum, the decades of the 1920s and the 1930s saw Iowa place primary emphasis on the improvement of instruction. A group of committees from the teaching profession, appointed by and under the direction of the department of public instruction, prepared, published, and distributed a new elementary course of study for rural and graded schools in 1928.² In addition, certain subject areas were designated to become topics of statewide emphasis in succeeding years. During the 1930s, reading and study, language, safety education, physical education, music, geography, history, and health education received special emphasis.³

¹All figures for enrollment and number of schools were taken from Iowa Public Instruction Department Reports for the years indicated.

²The Iowa Public Instruction Department Reports do not contain a copy of this course of study.

³Iowa Department of Public Instruction Report, 1936-1938, pp. 14-15.

Secondary education

In contrast to elementary enrollments, the number of students attending high school continued to show rapid growth. In 1919 State Superintendent P. E. McClenahan noted, "The high school today is considered as important as the elementary schools were a generation ago."¹ A total of 109,476 students were enrolled in Iowa high schools in 1919; by 1940-1941 total enrollment had reached 137,737.

In the early 1920s high school curricula were reflecting a trend toward the social subjects--history, civics, and economics. The expansion of practical arts continued and commercial courses, particularly typing, were being added to the curriculum. The major story of this period, however, was the expansion of work in vocational education. In accepting the provisions of the Smith-Hughes Act in April, 1917, Iowa recognized vocational education as a legal part of its educational system. The national legislation provided for three types of programs--day schools, part-time schools, and evening schools. Vocational homemaking originated in 1918 in four schools. By 1927 a total of 49 day schools offered such programs and by 1940, 163 schools enrolled a total of 10,015 students in vocational homemaking day classes.² By 1940

¹Iowa Department of Public Instruction Report, 1918-1919, p. 45.

²Iowa Department of Public Instruction Report, 1938-1940, p. 37.

agricultural education programs were being offered to 6,882 day students enrolled in 168 day schools.¹ Trade and industrial classes were also being conducted but to a much lesser degree. For the year 1939-1940, classes were offered in 34 cities and towns and enrolled 1,912 students.² These trade and industrial classes were conducted by two or three itinerant instructors from engineering extension at Iowa State College and local directors of vocational education. Additional students in each of these fields were enrolled in either part-time or evening classes, bringing the total enrollment figure for vocational schools and classes as of June 30, 1940, to 40,321.

In 1938 State Superintendent Agnes Samuelson remarked on the promising outlook for vocational education in Iowa.

The general growing recognition of the need for vocational training, the availability of federal vocational education funds, and the growing popularity of the movement are important factors which indicate a continued and healthy expansion of the program in the future.³

Consolidation Consolidation was almost brought to a standstill in 1917-1918 partly due to the war and partly due to adverse legislation which made it easier for opponents to

¹ Ibid.

² Ibid.

³ Iowa Public Instruction Department Report, 1936-1938, p. 68.

block consolidation. This legislation was amended, however, in 1919. With post-war economic prosperity growth quickly resumed, and the greatest era of consolidation in the state's history began.

Between July 1, 1919, and June 30, 1920, an average of ten new consolidated districts were formed for every nine school days, which in one 29-day period in March, 1920, a total of 33 districts were established.¹

Growth continued until suddenly late in 1921, primarily as a result of the economic depression that struck American farmers, the organization of new districts ceased. As of September 1, 1921, the state had a total of 439 consolidated school districts; by 1940-1941 the number had declined slightly to 407 districts.

Improved methods of transportation and the road construction boom of the 1920s and the 1930s made travel to consolidated schools safer and easier by 1940. While farmer-driven wagons constituted the most common form of transportation following World War I, motor vehicles were beginning to appear. Despite crude construction, lack of comfort, sometimes impassable roads, and occasional accidents, the children usually reached school and came home again safely. Or as one pioneer was reputed to have said, "As long as we are able to get hogs

¹George S. May, Growth of Consolidation, The Palimpsest 37 (January 1956): 34.

to market, we can probably get the children to school, if we try."¹ By 1925-1926, 27 percent of the districts were using motor buses exclusively, and by 1935-1936 this figure had risen to 85 percent.² After 1939 state legislation established minimum standards for both the construction and operation of school buses.

Normal training high schools By 1920 it was clear that the work of the normal training high schools was no longer on an experimental basis but was fulfilling a permanent need in preparing the majority of teachers for Iowa's rural schools. A total of 191 schools were in operation in 1920, and there was a constant demand for more. The number peaked in 1928-1929 at 205. By 1930 sentiment was growing in favor of making the teacher preparation course a fifth year program. Provision was made for a post-graduate year of teacher preparation under new Iowa certification legislation which was passed in 1933, but no such program was enacted during this period. Although the number of normal training high schools decreased, enrollment continued to increase until the mid-1930s. State Superintendent Agnes Samuelson spoke of the importance of continuing this work until the state raised the minimum

¹Iowa Public Instruction Department Report, 1918-1919, p. 43.

²George S. May, Transportation of Students, The Palimpsest 37 (January 1956): 54.

requirement for teachers entering the profession to graduation from high school. The number of schools, however, continued to decline. In 1938 there were 166 schools; by 1940-1941 the number had decreased to 153.

Higher education

The major new development in higher education in Iowa during this time was the coming of junior colleges. Public junior colleges which had originated in Mason City, Iowa, in 1918, numbered 27 by 1931 when the Forty-fourth General Assembly limited the establishment of new institutions to cities with a population of 20,000 or more. For the next ten years no new junior colleges were founded in Iowa. During the twelve year period from 1926 to 1938 enrollment, however, had almost doubled reaching 1,880 students in 1937-1938.¹ Enrollment continued to rise and in 1940-1941 a total of 2,489 students attended these 27 junior colleges.

Duplication among the three state institutions of higher education Under existing state legislation, the three state institutions of higher education continued to expand their programs of teacher preparation. The designation of Iowa State College as the one federally-approved, Smith-Hughes teacher preparation institution in Iowa sharply accelerated

¹Iowa Department of Public Instruction Report, 1940-1942, p. 19.

expansion of teacher education programs there. Continuing concern with the matter of duplication of work among the three state institutions of higher education prompted another study of this matter in 1926. Under a mandate of the Forty-first General Assembly a committee consisting of Samuel P. Capen, Edward C. Elliott, and George P. Zook¹ was authorized by the Iowa State Board of Education to investigate duplication among the three state institutions of higher education. After consideration of the committee's findings which were based upon their visitations and research, the state board of education filed its report. The board's conclusions with reference to the continued development of educational programs at Iowa State were generally very favorable. The board noted that the preparation of teachers for Smith-Hughes schools should be carried on only at Iowa State College. In reality, however, the board was simply extending its blessing to programs already in existence.

[Iowa State College] . . . has the equipment and the institutional point of view which make it preeminently the place for the training of teachers of agriculture, home economics, and trades and industries. These fields are its major lines. It receives the

¹Samuel P. Capen, formerly expert in higher education of the United States Bureau of Education and Director of the American Council of Education, presently Chancellor of the University of Buffalo; Edward C. Elliott, President of Purdue University; and George P. Zook, formerly Chief of the Higher Education Division of the United States Bureau of Education.

grants for teacher training provided by the Smith-Hughes Act. It must, therefore, unless the Smith-Hughes Fund is redistributable, train vocational teachers in all of the these lines.¹

The board further stated that Iowa State College should have the sole right to offer degree curricula for vocational teachers of agriculture, home economics, and trades and industries. It was recommended, therefore, that the undergraduate program in home economics at the State University of Iowa be dropped. With regard to physical education, the board suggested that the degree curricula for physical education teachers rightfully belonged at the State University, but that the State Teachers College could offer service courses in this area. No mention was made of courses in this area at Iowa State College.

Two further statements by the board at this time clearly acknowledged the basic factors which, working in concert, had produced duplication among the three state institutions, and pinpointed the board's essentially powerless position with respect to remedying the situation.

It must never be forgotten that these institutions are intensely human organizations. Not even the legislature, all powerful as it is, could adopt and maintain any drastic reorganization policy in

¹Minutes of the Iowa State Board of Education, Vol. VI. April 13, 1926 - November 4-5, 1927, p. 651.

regard to these institutions The trouble has been and continues to be that, broadly speaking, no one thinks and plans for those institutions from the purely educational standpoint and with an eye to our system as a whole. The thinking and planning are done from the institutional standpoint.¹

Enactments, laws, rules and public sentiment have, in and of themselves, tended to produce duplication of courses in the three major institutions, which the board was powerless to prevent.²

Teacher preparation

World War I and its aftermath were largely responsible for a teacher shortage occurring in Iowa during the war and continuing into the early 1920s. Military service as well as the availability of more remunerative positions were major contributing factors. The severity of the situation during the war was expressed by Guy M. Wilson, head of the Department of Agricultural Education at Iowa State College.

This shortage of teachers is keenly felt in the rural schools as well as in the high schools. Many rural schools in Iowa are closing because no teachers can be found. This is a time anyone desiring to teach may find a position.³

¹Ibid.

²Ibid., p. 653.

³Iowa State College Student, 11 October 1918, p. 2.

Wilson further noted that 87 teachers were placed out of 983 requests received by the appointment committee during 1918-1919.¹ Responding to this problem, the Thirty-eighth General Assembly established a Teachers' Placement Bureau. Organized on July 1, 1919, in the office of the state superintendent, the bureau served as a clearing house for supply and demand and offered its services free to all certified teachers. A return to peace and growing prosperity led to a rapid solution of the teacher shortage problem except in the fields of vocational education and special subjects. State Superintendent Samuelson noted in 1938 that the teacher preparation institutions had since the mid-1920s maintained an adequate supply of individuals except in the vocational and special subject fields.²

The matter of raising the standards of teacher preparation programs continued to concern the department of public instruction throughout the 1920s and the 1930s. State Superintendent Albert M. Deyoe in his report for 1918-1919 had recommended that teacher preparation requirements include one year of normal training following four years of high school either in a normal training high school or in a normal school.³ In

¹Iowa State College Student, 1 December 1919, p. 1.

²Iowa Department of Public Instruction Report, 1936-1938, p. 16.

³Iowa Department of Public Instruction Report, 1918-1919, p. 16.

addition, he had recommended the establishment of three elementary normal schools in Iowa. Neither of his suggestions were acted upon. A statewide study of teaching personnel in 1928 revealed a large percentage of inadequately prepared personnel and more than 40 percent who were new to teaching in 1928. Rural schools had the most rapid turnover.¹ In her report for the 1934-1936 biennium, State Superintendent Samuelson recommended immediate establishment of a one-year, special preparation program for teachers and an increase to two years as soon as justifiable.²

By 1941, despite these recommendations, Iowa still did not require preparation above high school graduation for her teachers. The large turnover of teacher personnel remained a concern as did the need for more adequate salaries, longer tenure, and provisions for retirement benefits. By 1938, 29 states had state-wide teacher retirement plans, but Iowa did not.³

Teacher certification

In the early years of the 1920s Iowa certification laws, in addition to requiring a specified number of credits in

¹Iowa Department of Public Instruction Report, 1936-1938, p. 26.

²Iowa Department of Public Instruction Report, 1934-1936, p. 10.

³Iowa Department of Public Instruction Report, 1936-1938, p. 27.

education and psychology, also required the thorough reading of one professional book yearly for certification renewal. The Iowa State Teachers Reading Circle was organized to provide uniform professional reading. Proof of completion of the required reading was to be submitted by each teacher to the county superintendent.

In 1929 the Forty-third General Assembly enacted new legislation which required high school graduation for teacher certification. A few years later, in 1933, legislative amendments required certificates issued on the basis of college preparation to indicate the number of years of training and the type of position for which the certificate was valid. The latter legislation was retroactive to five years and greatly helped to correct the longstanding concern of an absence of relationship between the certificate held and the type of school work for which an individual had been trained. The major concern regarding Iowa's low standards for entering the teaching profession, however, remained. In 1938 Iowa State Superintendent Agnes Samuelson remarked that the top priority was increasing the minimum qualifications for entrance to the teaching profession in Iowa. Clearly, Iowa was lagging behind, for by 1938 many states required two, three, or four years of collegiate preparation. Almost half of Iowa's newly certificated teacher had received at best only minimal preparation beyond high school.

During the school year ending June 30, 1938, twenty-one percent of all persons who were issued new certificates had not taken any college work and an additional twenty-eight percent had received but twelve weeks of college training.¹

Improved trends in certification were noted, however, by the Iowa Board of Educational Examiners between 1937 and 1940. These included: an annual decrease in standard elementary (two years of post-high school elementary preparation) certificates; an annual increase in advanced elementary (four years of post-high school elementary preparation) certificates; and an apparently steady increase in standard secondary (four years of post-high school secondary preparation) certificates.² During this biennium the board also raised standards for special subjects (art, library, music, and physical education) certificates and supervisors certificates.

Iowa State College: The Era of
Vocational Education, 1917-1941

Based on the provisions of the Smith-Hughes Act and the approval of the state and federal boards of vocational education as the one institution in Iowa for the preparation of teachers in agriculture, home economics, and trade and

¹Iowa Department of Public Instruction Report, 1936-1938, p. 27.

²Iowa Department of Public Instruction Report, 1938-1940, p. 72.

industries, Iowa State College moved forward during this period to establish strong teacher preparation programs in each of these vocational fields.

Major leadership of the teacher preparation program was assumed by the Department of Vocational Education within the Division of Agriculture. This department was established at the college in 1919, and its first head was Guy M. Wilson. The primary responsibility of the department was the preparation of its own students for positions as high school teachers and public school administrators. In addition, however, the department served as both an instructional and coordinating center for prospective teachers from other departments, principally from within the Divisions of Home Economics and Industrial Science. Throughout these years, the Department of Psychology provided a strong supportive role. In addition, nine separate departments within the Division of Industrial Science provided one or more teacher preparation courses.

The Smith-Hughes legislation was also instrumental in the development of summer work at Iowa State College. A large portion of summer school students continued to be in-service teachers. The course work was directed toward fulfilling the needs of three major groups: teachers, principals, and supervisors seeking to qualify themselves in vocational fields; students seeking to meet certification requirements in vocational education and psychology; and students desiring to

either make up missed work or to take additional work. Thus, during both the regular college year and the summer quarters, the primary emphasis of teacher preparation programs during this period was in vocational education.

Psychology

Under the leadership of Orange Howard Cessna and John Ellis Evans, the Department of Psychology continued to play an important role in the preparation of teachers at Iowa State College during the years from 1917 to 1941. Cessna continued as head of the department until 1922 when he was succeeded by Evans. Cessna remained in the department, however, as professor of psychology until 1932. Evans received a diploma from the Indiana State Normal School and, later, the B.S. and M.S. degrees from Indiana University. In 1916 he received his Ph.D. from Columbia University and then was a member of the faculty at Ohio State University before coming to Ames in 1921. He introduced courses in industrial psychology, and "he promoted courses in child psychology, testing, study skills, psychology of the abnormal, educational psychology, and driver training."¹ He was also instrumental in developing the psychological testing program at Iowa State and in providing individual testing in the Ames public schools.

¹Memorial Resolution, O. H. Cessna File, Psychology Ad-18, Folder No. 1-3, Iowa State University Special Collections, Ames, Iowa.

Throughout these years the department maintained that "every vocation that involves the human element is of necessity founded on psychological principles."¹ Although the department was clearly attempting to meet the needs of prospective teachers as well as the needs of students preparing for other vocational and industrial fields, it was not until 1928 that teaching was specifically mentioned in the description of the department contained in the Catalogue. At this time it was noted that one of the aims of the department was "to present the essential psychological principles underlying effective teaching."² Directly in accordance with this philosophy, the department, in 1929, began to expand its program of elective courses for prospective teachers. Undergraduate teacher preparation courses in psychology and the years each was offered from 1917 to 1941 are shown in Table 5.

Despite President Pearson's apparent acceptance of the 1916 survey commission report, which had recommended the delimitation of work in psychology to the amount requisite for a first-grade state teachers' certificate to minimize duplication of courses among the three state universities, the Department of Psychology offered teacher preparation courses in excess of those required for certification as well as

¹Iowa State College Catalogue, 1924-25, p. 219.

²Iowa State College Catalogue, 1928-29, p. 240.

Table 5. Undergraduate teacher preparation courses in psychology, 1917-1938

		Year		
		1917-18	1918-19	1919-20
415*	Psychology of Childhood and Adolescence	X	X	X
204**	General Psychology	X	X	X
20 or 20a and 20b	Educational Psychology	X	X	X
434***	Tests and Educational Measurements			X
334#	Educational Psychology (Learning)			
335##	Educational Psychology (Motivation)			
516###	Advanced Child Psychology			
530†	Psychology of Skill			
538††	Psychology of Guidance and Vocational Selection			
533†††	Tests and Measurement Interpretation			
536	Psychology of Reading			

*No. 6 from 1917-1919; No. 25 Childhood and Adolescence from 1919-1934.

**No. 7, Outlines of Psychology from 1917-1919; No. 1, General Psychology from 1919-1924; No. 5 from 1924-1934.

***No. 14, Mental Tests from 1919-1929; No. 14, Mental Principles from 1929-1934.

#No. 21a, the Psychology of Learning from 1926-1934.

##No. 22a, The Psychology of Motivation from 1926-1934.

###No. 26a from 1929-1934.

†No. 23 from 1932-1934; No. 410 from 1934-1937.

††No. 438 from 1934-1937.

†††No. 433 from 1935-1937.

								X	X	X	X	1920-21
								X	X	X	X	1921-22
								X	X	X	X	1922-23
								X	X	X	X	1923-24
								X	X	X	X	1924-25
								X	X	X	X	1925-26
								X	X	X	X	1926-27
								X	X	X	X	1927-28
								X	X	X	X	1928-29
								X	X	X	X	1929-30
								X	X	X	X	1930-31
								X	X	X	X	1931-32
								X	X	X	X	1932-33
								X	X	X	X	1933-34
								X	X	X	X	1934-35
								X	X	X	X	1935-36
								X	X	X	X	1936-37
								X	X	X	X	1937-38
								X	X	X	X	1938-39
								X	X	X	X	1939-40
								X	X	X	X	1940-41

numerous other courses in psychology. From 1917 to 1941 the equivalent of nine quarter hours¹ in psychology were required for a first-grade teacher's certificate. To meet this stipulation Iowa State required its prospective teachers to take the following courses: General Psychology, (known as Outlines of Psychology from 1917 to 1919), a basic course in psychological principles was required throughout this period; Educational Psychology, which considered the "special phases of general and genetic psychology which are most applicable to education"² from 1917 to 1924; Educational Psychology, (known as The Psychology of Learning), was required from 1924 to 1941. Educational Psychology, (known as The Psychology of Motivation), was required from 1924 to 1936. Tests and Measurements, which had been an elective beginning in 1919, was required from 1936 to 1941 in preference to the course in educational psychology dealing with motivation. In addition, the Psychology of Childhood and Adolescence was specifically designated as an elective for prospective teachers during the years from 1917 to 1925 and offered thereafter as an undesignated elective. The department also offered the following:

¹From 1917 to 1919 the requirement was six semester hours.

²Iowa State College Catalogue, 1923-24, p. 203.

a course in tests and measurements (1919-1941); Advanced Child Psychology (1932-1941); Psychology of Skill, which considered the learning of skills and techniques, principles of transfer of training, mechanical aptitudes, motivation in the shop,¹ and the development of muscular coordination, (1932-1937 and, thereafter, in alternate years); Psychology of Guidance and Vocational Selection, which included principles of guidance for the teacher, (1934-1941); and Tests and Measurement Interpretation (1935-1941). The high point of departmental offerings for prospective teachers occurred between 1935 and 1937 when, in addition to the three required courses, a total of seven electives were offered.

Home economics

Between 1917 and 1941 the Division of Home Economics at Iowa State College was under the direction of the following women who served as Deans: Catherine J. MacKay (1913-1921); Edna F. Walls (acting Dean, 1921-1922); Anna E. Richardson, (1923-1926); Francis A. Sims (acting Dean, 1926); and Genevieve Fisher (1927-1944). During these years, the division offered a number of different teacher preparation programs. These were offered during various years and for varying lengths of time. In some instances the programs combined home economics with another subject area, while in others the work was concentrated

¹Iowa State College Catalogue, 1932-1933, p. 246.

within a specific subdivision of home economics. Although each of these teacher education programs was important, those of primary interest (to this investigation) during these years were the ones offered by the departments of home economics vocational education, home economics education, and child development.

In response to passage of the state legislation requiring the teaching of agriculture, domestic science, and manual training in all the public schools of Iowa after July 1, 1915, and to the acceptance in Iowa of the Smith-Hughes Act, Iowa State College received a large number of requests for teachers of domestic science. Schools developing home economics programs with the assistance of federal monies were required to employ graduates of four-year teacher preparation programs, and this was a crucial factor in the development of such programs at Iowa State. The student newspaper noted, in 1917, that the college had received 707 requests for teachers, 420 of which were for teachers of domestic science or domestic science in combination with another subject.¹

In 1917 the state board of education in Iowa approved the adoption and implementation of a four-year course in home economics and agriculture. Among the reasons advanced for the development of this combined major was the fact that many high

¹Iowa State Student, 11 September 1917, p. 3.

school home economics teachers were also required to teach agriculture.¹ It is interesting to note that as early as 1898, Charles F. Curtiss was reputed to have emphasized the value of a study of agriculture for girls as well as boys and for all teachers.

We don't suppose there is a young lady teacher in Cherokee county who would object to going out for a few hours each day and instructing the boys in the art of plowing and planting, slopping the hogs and sich [sic] like. Every teacher in the county is of course posted on these things. And the girls should be instructed in the art of making butter from cream six weeks old, gathering eggs from nests that haven't been warmed by a hen for a month, and making a calf believe that a finger is--something else.²

This home economics and agriculture course was continuously offered within the Division of Home Economics until 1928 when it was dropped. Specific teacher preparation courses required for this program were taught at varying times in the departments of agricultural education, psychology, and home economics. Required work in home economics included courses in teaching home economics, child care and training, and a

¹Iowa State College Catalogue, 1917-1918, p. 247.

²Cherokee [Iowa] Democrat, C. F. Curtiss Papers, AA-1, Folder No. 1-6, Iowa State University Special Collections, Ames, Iowa.

period of residence in a home management house.¹ The majority of professional preparation work, however, was apparently obtained through electives.

The demand for teachers of home economics continued to rise, and the entry of the United States into World War I subsequently underscored the need for adequately trained personnel.

The nation and the state are choosing by the scores those who have shown ability in teaching and placing them in positions of leadership The demand for trained women . . . far exceeds the supply. Superintendents are searching far and wide for teachers to take the places of those who have been called into national and state service. Never has there been such an opportunity for rapid advancement in home economics work.²

On November 18, 1918, the Vocational Board of Iowa approved Iowa State College as an institution for the preparation of teachers of vocational home economics.

¹The home management houses, experience in which was a requirement of Smith-Hughes legislation, were fully-equipped residences the first of which was established on campus in 1916. Additional houses were opened in 1920, 1923, and 1925. Each house accommodated eight girls per six week period, or 48 girls per year. Beginning in 1924 these houses also offered training in child care since a young child was also in residence. Twenty-year Development Program, Part IV, September, 1935, pp. 57-58. College of Home Economics, Class No. AC, Box No. 5. Iowa State University Special Collections, Ames, Iowa.

²The Iowa State College Student, 14 May 1918, p. 4.

By the Smith-Hughes bill, Iowa is to get \$15,618 in 1918, \$23,475 in 1919 and \$31,300 in 1920 This year [1917] \$8,000 is provided for Home Economics work in Iowa and the work of agriculture and the mechanical arts a proportional amount.¹

Responding to this new obligation, the college reorganized several of its departments. In 1919 the Department of Agricultural Education became the Department of Vocational Education and ceased to offer a curriculum which included home economics. As a result, teacher training in home economics became primarily the responsibility of the Division of Home Economics although cooperation with the vocational education department continued. Courses for both general and vocational teachers of home economics were administered in the Division of Home Economics, but teacher preparation work was provided by the Department of Vocational Education.²

The Division of Home Economics continued to offer two, two-year noncollegiate courses in home economics. Both the course in home economics and the course combining home economics and agriculture had as their major aim the preparation of women for such diverse occupations as "tea room managers, caterers, dressmakers, milliners, demonstrators, unaccredited and rural school teachers and farm managers."³

¹Iowa State College Student, 16 October 1917, p. 4. The federal amount appropriated nationally in 1917 was \$7,150,122.

²Iowa State College Catalogue, 1920-1921, p. 186.

³Iowa State College Catalogue, 1918-1919, p. 345.

These courses were offered until 1924 when they were dropped from noncollegiate offerings in home economics. Although a noncollegiate sequence of courses entitled Homemakers' Short Unit Course continued until 1928, there was no mention of teacher preparation.

In 1919 the Division of Home Economics offered three teacher preparation major sequences within the standard four-year curriculum: home economics, home economics in combination with applied art, and home economics in combination with physical education. Teacher preparation in home economics continued until 1927 when it was superseded by a major sequence in home economics vocational education. Home economics and applied art continued until 1929, and home economics and physical education until 1934.

The Department of Home Economics also offered teacher preparation in applied art alone beginning in 1924, with a major sequence commencing in 1927 and continuing through 1940. The subdivision of applied art was under the direction of Professor Joanne (listed as Joanna until 1929-1930) M. Hansen.

Joanne M. Hansen, originally from Denmark, received a diploma from Pratt Institute, a B.S. from Iowa State Teachers College, and an M.S. from Columbia University. She joined the Iowa State faculty permanently in 1919, and for 21 years (1920-1941) she served as head of Applied Art. She was instrumental in the development of Home Economics Hall, and as

Eppright and Ferguson note, she "devoted her life to bringing art appreciation to students of Iowa State and the people of Iowa."¹ The subdivision listed as part of its program a desire to furnish instruction to satisfy "the growing demand for teachers in Applied and Related Art"² All professional teacher preparation courses, however, were taught outside the subdivision.

A similar-type program occurred within the subdivision of textiles and clothing which was under the direction of Frances A. Sims (from 1925 to 1931) and Rosalie Rathbone (Craft) from 1931 to 1952. Commencing in 1929 and continuing until 1937, the major sequence in textiles and clothing aimed among other things" to prepare students for the teaching of clothing in the secondary schools"³ A sewing course specifically for teachers had been offered in the subdivision of household administration from 1921 to 1924 and in home economics vocational education from 1924 to 1928, but no professional teacher preparation courses related to textiles and clothing were offered within any subdivision of home economics during the time of the major sequence in textiles and clothing. This subdivision continued to exist after 1937, but no further

¹Eppright and Ferguson, p. 180.

²Iowa State College Catalogue, 1929-1930, p. 197.

³Ibid., p. 207.

reference was made to teacher preparation.

A brief, but interesting, teacher preparation program also within the subdivision of applied art occurred between 1932 and 1935. During these years a curriculum in occupational therapy in conjunction with the University of Iowa hospitals was available to students desiring to teach in this field.

Between 1917 and 1921 the Division of Home Economics offered five separate courses in teacher preparation. Two basic courses involving training in teaching home economics were offered throughout these years. During 1918-1919 only, a course in industrial handiwork was offered for "teachers of playground and 'open air' classes."¹ Beginning in 1919 course 470b, Practice House, began to provide specific preparation for teachers. "Students preparing to teach Vocational Home Economics under the Smith-Hughes Act will be required to spend four weeks in the practice house."² A new course in special methods for teachers was introduced in 1920. During these years the supervised teaching experience was conducted in the schools of Ames, Iowa.

¹Iowa State College Catalogue, 1918-1919, p. 226. Although this course was continued in succeeding years, it was not specifically designed for the preparation of teachers.

²Iowa State College Catalogue, 1919-1920, p. 219.

Students who expect to teach have the privilege of teaching classes in the grade and high schools of Ames under the direct supervision of the superintendent of schools, and of the Vocational Education and Home Economics departments. Each student was required to teach twenty-four practice lessons. To supplement this work demonstrations are given by each student before such audiences such as women's clubs, teachers' institutes, . . . and other organizations.¹

Home economics vocational education In 1921 the Division of Home Economics offered five separate teacher preparation courses in its newly created subdivision of home economics vocational education, which was under the direction of Associate Professor Cora B. Miller. Both the Seminar in Home Economics Education and Teaching Home Economics 127, which was designed for students taking the two-year program, were new. Table 6 lists all undergraduate teacher preparation course in home economics vocational education from 1921 to 1928.

In 1924 this subdivision received designation as a full department and, in 1926, began to offer a major sequence in home economics vocational education. At this time, the department received approval from the Federal Board for Vocational Education for training teachers in homemaking.² In addition to courses in vocational education and psychology,

¹Iowa State College Catalogue, 1919-1920, pp. 73-74.

²Iowa State College Catalogue, 1926-1927, p. 181.

Table 6. Undergraduate teacher preparation courses in home economics vocational education, 1921-1928

No.	Course Name	Year						
		1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28
126a	Teaching Home Economics	X	X	X	X	X	X	X
126b	Teaching Home Economics*	X	X	X	X	X	X	X
127	Teaching Home Economics	X	X	X	X	X	X	X
122	Special Methods for Teachers**	X	X	X	X	X	X	X
526	Seminar in Home Economics Education	X	X	X	X	X	X	X
525	Advanced Methods of Teaching Home Economics***		X	X	X	X	X	X
129	Methods of Teaching Clothing#				X	X	X	X
124	Home Economics and the Health Program					X	X	
125	Teaching of Child Care					X	X	X
527	Technique of Supervision					X	X	X
528	Methods for Vocational Teachers					X	X	X
120	Special Problems in Vocational Education							X

*Supervised Teaching in Home Economics from 1925-1928.

**Teaching Home Economics from 1921-1925.

***Study of High School Home Economics from 1922-1925.

#Sewing Course for Teachers in 1924-1925.

students were required to complete Teaching Home Economics 126a and 126b. A clear indication of the increasing number of students being served by the department came from the fact that supervised teaching was no longer limited to Ames schools, but schools in Kelley, Jordan, Gilbert, and Huxley had been added to provide additional laboratory space.¹ Miss Marcia E. Turner, associate professor of home economics vocational education, noted that during the winter quarter "there have been approximately 35 girls teaching This number is much greater than the number of students in any other institution in the United States who teach in high schools."² Student teachers were expected to become involved in the community activities of the town in which they fulfilled their practice teaching requirement. One instance of such involvement took place in Kelley, Iowa, on December 16, 1925.

Iowa State students who . . . were doing practice teaching will have charge of an all-day fair The fair will include Story County livestock, grain and home economics judging contests, . . . a poultry show, a home economics exhibit, demonstrations, bazaar, a band concert and free movies.³

During these years six separate courses emphasized methods of teaching while three others covered home economics and the

¹Eppright and Ferguson, p. 129.

²Iowa State Student, 9 December, 1925, p. 3.

³Iowa State Student, 25 November, 1925, p. 3.

health program, the teaching of child care, and supervision. In 1927-1928 the course in home economics and the health program was dropped, and a course in special problems was added. Thus, during the final year of the program a total of 11 teacher preparation courses were offered. Upon completing the required sequence in home economic vocational education students received a first grade state teacher's certificate.

Home economics education In 1928 vocational home economics was redesignated home economics education. Course offerings remained identical until 1930. Table 7 lists all the undergraduate teacher preparation courses in home economics education from 1928 to 1941. Cora B. Miller, who had been in charge of home economics education work since 1916, served as head of this department until 1938 when Florence Fallgatter assumed the position. Cora Miller continued to serve the department, however, until her retirement in 1941. During her tenure it was reported that "more than 1500 students were prepared for teaching under her splendid and kindly guidance, and [were] now holding positions in every state of the Union."¹ It was also said that during this period of Cora Miller's leadership" the teacher education program grew into

¹Iowa Home Economics Association News Letter, Spring 1944, College of Home Economics Scrapbooks, Class No. AC History Collection, Box No. 9, Iowa State University Special Collections, Ames, Iowa.

Table 7. Undergraduate teacher preparation courses in home economics education, 1928-1941

No.	Course Name	Year												
		1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41
525	Advanced Methods of Teaching Home Economics	X	X											
120	Special Problems in Home Economics Education	X	X	X	X	X	X							
526	Seminar in Home Economics Education	X	X											
122	Special Methods for Teachers	X	X	X	X									
125	Teaching of Child Care	X	X											
406*	Methods of Teaching Home Economics	X	X	X	X	X	X	X	X	X	X	X	X	X
407**	Supervised Teaching in Home Economics	X	X	X	X	X	X	X	X	X	X	X	X	X
127	Teaching Home Economics	X	X											
505***	Methods of Teaching Clothing	X	X	X	X	X	X	X	X					
528#	Methods of Vocational Teachers	X	X	X	X	X	X	X	X	X	X			
506##	Teaching Human Relations in Public Schools				X	X	X	X	X	X	X	X		
507###	Methods of Teaching Related Art				X	X	X	X	X					
508†	Methods of Teaching Adult Homemaking Classes				X	X	X	X	X	X	X	X	X	X
504	Special Topics in Home Economics Education								X	X	X	X	X	X
405	Observation of Teaching												X	X

*No. 126a Teaching Home Economics 1928 to 1934.

**No. 126b from 1928 to 1934.

***No. 129 from 1928 to 1934.

#No. 514 from 1934-1937; and No. 528 in 1937-1938.

##No. 220 from 1930 to 1934.

###No. 221 from 1931 to 1934.

†No. 222 from 1931 to 1934, known as Methods for Evening School Classes from 1931 to 1937. Known as Methods of Teaching Adult Homemaking Classes in 1937-38.

one of the outstanding programs of Home Economics in the country."¹ Professor Miller spoke clearly of the value and necessity of maintaining the teacher education program.

The teaching of home economics in public schools is the largest wage earning outlet for women trained in the Home Economics Division of Iowa State College.

From two-thirds to three-fourths of the students of every class take the training which prepares them for this work and last year, [1931], about 150 women were graduated from the department.

Currently there are approximately 1,000 teachers of home economics in Iowa and since the 'turn-over' in this field is great, there is a constant demand for well-trained teachers in our state. Seventy-eight of last year's graduates are located in Iowa schools.²

Beginning in 1929 a major in home economics education offered the student a choice of electing either a program designed to prepare them to teach in the federally aided (Smith-Hughes or George Reed) high schools or the standard teacher preparation program in home economics. The Department of Home Economics had been preparing teachers for Smith-Hughes schools since 1919, but prior to 1929, requirements had so closely coincided with those of the regular program that the only addition stipulations were to spend extended periods of time in both supervised teaching and in residence in a Practice House.

¹Ibid., February 24, 1944.

²Iowa State College Student, 16 January 1932, p. 2.

Students following the Smith-Hughes curriculum were required to take specific courses. First, they had to complete the basic program for all home economics students as well as the requirements for a major in home economics education. Then, an additional six credits in home economics education and six credits in general subjects including English, history, modern languages, economic science, and mathematics were required.¹ Students were also urged to complete 15 to 18 credit hours of work in another area of interest since "the majority of high schools in the state require the home economics teacher to teach at least one other subject."² From 1929 to 1931 the only course specified for inclusion in this program was Methods for Vocational Teachers. Beginning in 1931, however, additional experience in home management was required and the additional credit hours in home economics education were specified. These courses and the years in which each was required were as follows: Methods for Vocational Teachers, 1931-1939; Methods of Teaching Related Art, 1931-1937; and Methods for Evening School Classes, 1931-1937. In 1937 Methods for Evening School Classes was changed to Teaching Adult Homemaking Classes, and this course was required from 1937 to 1941.

¹Iowa State College Catalogue, 1929-1930, pp. 201-202.

²Ibid., p. 201.

While all home economics students were required to take certain basic courses during their first two years, students who did not wish to teach in Smith-Hughes high schools did not have to meet course requirements for Smith-Hughes schools. Instead, these students elected work in their junior and senior years from one of the following departments in which they were majoring: applied art, foods and nutrition, household administration, institutional administration, physical education, technical journalism, and textiles and clothing. Students in this program were eligible for a first grade state certificate by completing the state requirements of twenty-one hours in education and the nine hours in psychology.

Not only did the home economics education majors receive high quality instruction on campus, but they also had an opportunity to receive practical training for their future role as teachers off-campus as well. In one instance, the girls themselves apparently undertook a certain project. According to Verna Rhoden, a senior home economics education major, project plans were made for providing education majors with experience in sponsoring various secondary school activities and discussion groups.

From 10:00 a.m. to 10:30 a.m. on Monday, Thursday and Friday of each week, meetings will be held in the junior high school of Ames. During these periods, girls from the education department of the Home Economics Division will be given an opportunity to train the high school

girls in such activities as dramatics, music, art, program planning, and to lead discussion groups on personality and health.¹

Participation in off-campus activities by the home economics education department was not only limited to the students. In January, 1934, Instructor Alice Dohlen of the home economics education department conducted a class in home economics at Ames High School. The class included 24 boys, all of whom were studying such topics as social and family relations, clothing selection and design, and family expenditures.²

Between 1930 and 1941 five new courses were added in the department of home economics education and eight were dropped. The high point of course offerings occurred during the 1931-1932 academic year with a total of nine being available. A gradual decline in ensuing years brought departmental offerings to five courses during 1940-1941.

The latter years of this period reflected increasing concern on the part of the Department of Home Economics Education with the humanistic approach to the educational process. Professor Regina Friant spoke to this point.

¹Iowa State College Student, 11 October 1930, p. 3.

²Raymond M. Hughes Papers, Box 1, Series 2/8/0/2, Folder: Report to the Board of Education, 1934, Iowa State University Special Collections, Ames, Iowa.

. . . Home economics educators at Iowa State College instruct their students in education to lay aside their demanding attitudes in instruction, replacing them with ones of cooperation and friendly guidance. It isn't whether a student burned the bacon or frenched a felled seam, but how she cooperated in washing dishes and sharing the sewing machine, utilized a dash of initiative in solving her own problems, and asserted her own independence that indicates to the homemaking instructor how she is improving under 'progressive education methods'.

Furthermore, the objectives in presenting this revised form of education, as outlined, are to encourage pupils to adequately cope with life situations, and to stimulate growth toward social maturity . . . self-improvement has become the slide-rule for measuring progress in homemaking.¹

The importance of a cooperative spirit was also stressed by J. A. Starrak, professor of vocational education, in a talk delivered to home economics students who were ready to enter upon their practice teaching. He suggested that the practice teacher had to be able to get along with the administration, members of the faculty, the pupils and the community.

In the first two cases, proper adjustments demand loyalty to the superintendent, as a first duty, cooperation with him and the other teachers and paying strict attention to business. If you should happen to fall in love with one of the male members of the faculty, . . . don't be too openly enthusiastic about it.²

¹Iowa State College Student, 20 May 1937, p. 1.

²The Iowa State College Student, 15 February 1936, p. 1.

Starrak also cautioned the prospective practice teachers against dating the students, that trying to be popular was a sure way to lose the students' respect and a major cause of discipline problems, and that shirking of extracurricular activities would not be looked upon favorably. Finally, the young teacher should

. . . take part in community affairs, attend church regularly, but help others on occasion; don't take sides in community 'rows' or ridicule local customs; be willing to spend most of your weekends in town; be very careful of the company you keep, . . . ; be friendly with the parents, not too reserved, but don't be patronizing in your attitude.¹

Child development The other major teacher preparation department within the Division of Home Economics during this period was Child Development. Between 1928 and 1930 preparation in pre-school education had been coordinated under the subdivision of household administration, and during 1929-1930 this subdivision offered a major sequence in child care and training. Reporting to the Iowa State Board of Education on June 10, 1930, President Raymond Hughes requested the addition of an instructor and a teaching fellow in the area of child development to provide for additional students interested in this field of study.

¹Ibid.

This addition is necessary to take care of the increasing demand in this department. It has been found necessary to expand the facilities in Child Care and Training by opening up one of the residences as an addition to the nursery school. This will increase the number of children provided for to 40.¹

Commencing in 1930, under the direction of Lulu R. Lancaster (1930-1935) and later Lydia Swanson (1935-1943), the Department of Child Development sought to prepare students for "nursery school teaching and leadership in parent education programs."² Offering only three courses in 1930, the department doubled its course offerings by 1933 and then maintained a total of six courses through 1940. Table 8 lists all undergraduate teacher preparation courses in child development from 1930 to 1941.

In addition to completing the basic two-year program for all home economics majors, students wishing to specialize in the growth and development of preschool children were required to observe and assist in the nursery school³ as well as to

¹Minutes of the Iowa State Board of Education, Vol. VIII, September 18, 1929 - May 26, 1931, p. 250.

²Iowa State College Catalogue, 1930-31, p. 205.

³The first nursery school at Iowa State was organized in 1924 under the direction of Lulu R. Lancaster. Housed at first in a temporary home economics building, it was moved in 1925 to the completely remodeled horticulture barn. It remained there until it was razed in 1948 to make room for the Research Building of the Ames Laboratory of the Atomic Energy Commission. Eppright and Ferguson, p. 101.

Table 8. Undergraduate teacher preparation courses in child development, 1930-1941

No.	Course Name	Year											
		1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	
435a	Child Care and Training	X	X	X	X	X	X	X	X	X	X	X	X
556,557*	Techniques of Guidance	X	X	X	X	X	X	X	X	X	X	X	X
555**	Special Topics	X	X	X	X	X	X	X	X	X	X	X	X
440	Play and Play Materials		X	X	X	X	X	X	X	X	X	X	X
230***	Activities in the Nursery School				X	X	X	X					
536#	Advanced Child Care and Training				X	X	X	X	X	X	X	X	X
465	Seminar							X	X	X	X	X	X

*No. 435b, Techniques of Child Guidance, 1930-31; No. 450, Techniques of Guidance, 1931-1934; and No. 550, Techniques of Guidance 1934-1937.

**No. 455 from 1930-1934; known as Special Problems from 1930 to 1939.

***No. 430 in 1933-1934.

#No. 436 from 1933-1935.

complete courses in nutrition, hygiene, physiology and psychology.¹ In addition to offices and a playroom, the nursery school also contained a kitchen. The Iowa State Student records a typical lesson in nursery school cooking.

. . . into this kitchen came children who do not like certain foods. Under the supervision of a senior college home economics student taking special problems in Foods and Nutrition, a child who does not like carrots, or eggs, or some other food, helps to prepare the food, watches it cook, tastes tests, and serves it. He may choose a playmate to help him, and another one to eat with him, thus making a party of the whole affair.

And it has been found through repeated experiments with different children that they will eat a formally disliked food if they prepare it themselves.²

Residence in a home management house also constituted an integral part of the program. In order to make these houses as real to the life situation as possible, children were needed to reside both day and night. "In January 1924 the first children 'Sonny' and 'Gretchen' came to live at the home management houses" ³ In 1927 the student newspaper reported that "practice babies" were acquired by Miss Lydia Swanson, acting director of the nursery school, through the Des Moines Juvenile Court.

¹Iowa State College Catalogue, 1930-1931, p. 205.

²Iowa State College Student, 7 April 1932, p. 1.

³Twenty-Year Development Program, Part IV, p. 57.

The court usually released the children for a period of two years, with the provision that the school take over the responsibility of the children and return them after two years of care. The children are usually orphans. . . . The director of the nursery school has her own choice of the children in the court.¹

The practice of securing children, usually between three and twelve months of age from social agencies continued until 1958, when changing social conditions among the college students and increased demands upon the agencies made continuation of the program impractical.

Some 275 babies have lived in Iowa State home management houses since the beginning of the program 34 years ago Since 1940 the division has had an arrangement with the Iowa Children's Home Society of Des Moines, and before that time with other social agencies. The child development department has supervised the infant program. The agency can no longer keep up with the demand of prospective parents and us [Iowa State College], too²

Further teacher preparation work for those interested in teaching preschool children was made available to a limited number of seniors through joint cooperation between the department and the Merrill-Palmer School of Homemaking in Detroit, Michigan, which both Lulu Lancaster and Lydia Swanson had attended.³

¹Iowa State College Student, 22 October 1927, p. 3.

²The Iowa State Daily, 26 September, 1958, p. 2.

³Iowa State College Catalogue, 1931-1932, p. 206.

Agricultural education, 1917-1919

The passage of the Smith-Hughes Act had an immediate effect upon teacher preparation programs at Iowa State College. Two, new four-year programs--Home Economics and Agriculture and Agriculture and Manual Training were begun in 1917. Several factors suggested the need for such programs. First, the college was receiving a large number of requests for competent teachers. Second, the continuing movement toward school consolidation suggested increased demands for personnel prepared in these fields. In addition, the department of public instruction had expressed definite interest in the development of a program combining agriculture and manual training.

At a conference to consider the matter, three members of the department of public instruction . . . urged strongly the desirability of offering a course of study to prepare men who could teach the subjects of agriculture and manual training in consolidated and small high schools.¹

Since the subjects necessary for such a program were already being offered at the college, only organization of the work was required; this was readily achieved. The curriculum in agriculture and manual training prepared young men to teach both subjects in either the independent public high schools or the consolidated schools.

¹Iowa State College Catalogue, 1917-1918, p. 444.

Between 1917 and 1919 teacher preparation work continued within the Department of Agricultural Education. These years, however, revealed changes related to the growing importance of vocational education. All undergraduate teacher preparation courses offered during 1916-1917 (see Table 4) were continued, and four new courses were added: Rural Education, Vocational Guidance, Observation (home economics and agriculture), and Training in Teaching Manual Training. The course in vocational guidance, however, was dropped in 1918. Three other courses underwent title changes in 1918, which gave further indication of the growing emphasis on vocational education: Methods of Teaching became Methods of Teaching Vocational Education; Principles of Education became Principles of Vocational Education; and, Educational History was retitled History of Vocational Education.

Additional help in providing service to Iowa's public school teachers was provided by the Agricultural Extension Division of the College. This important service arm of the College not only conducted some 30 courses, which were specifically designed to meet the needs of Iowa's rural school teacher, but it also introduced correspondence courses and publications especially prepared for teachers of agriculture, home economics, and manual training.¹

¹Iowa State College Catalogue, 1917-1918, pp. 407-408.

Vocational education, 1919-1941

While the vocational education department was apparently formed in 1917, it was not until 1919, when Iowa State College was officially approved for teacher preparation work under the Smith-Hughes Act,¹ that the majority of teacher preparation courses came under direct jurisdiction of the department. According to Barton Morgan,² selection of the term "vocational education" was related not only to the vocational emphasis of the Smith-Hughes legislation but also to the fact that it represented "a compromise to get the approval for expansion of work in teacher education from the State University of Iowa and Iowa State Teachers' College."³

At its inception, the Department of Vocational Education administered two teacher preparation courses--Agricultural Education and Agriculture and Manual Training. Although the Division of Home Economics administered the teacher preparation program for general and vocational teachers of home economics and the Division of Engineering administered the program for teachers of manual training or trades and industries, the Department of Vocational Education provided the teacher preparation course work through 1938. Since vocational education

¹Eppright and Ferguson, p. 74.

²Barton Morgan was appointed head of the vocational education department in 1937.

³Morgan to Weller, 18 January 1975.

programs included the 30 hours in psychology and education required for certification, graduates of these programs were entitled to a five-year first grade state teacher's certificate without having to take an examination.

There is little doubt that the teacher preparation which students in vocational education received at Iowa State College was of superior quality. Most of the neighboring states in which students found employment, if they did not remain in Iowa as the majority did, required fewer than thirty quarter hours in education and psychology. Professor J. A. Linke, who was the regional director for vocational agriculture for the North Central States, expressed strong approval of the Iowa State College program and noted that he "was especially well pleased with the provisions for supervising the teaching of the vocational agriculture course in the Ames High School in the North Grant Consolidated School."¹

Guy M. Wilson, former head of the agricultural education department, was the first director of the Department of Vocational Education. Early in his tenure he underscored the need for programs of the type Iowa State College had initiated. He spoke of the teacher shortage which had been caused partly by the war but also by the fact that the schools in Iowa were developing vocational programs at a more rapid rate than

¹The Iowa State College Student, 3 November 1919, p. 3.

competent teachers could be prepared to teach them. Wilson stated that

. . . an average of fifteen requests for high school teachers comes to his office every week, and there is no one to recommend. Additionally, there have been constant calls for agriculture and mechanical training teachers during the summer and fall and there have been no applicants for these positions since June.

Men have not been allowed to fill teaching positions because the government felt it could make better use of them. For this reason women have had to take up the positions vacated by the men. It is hoped that the schools will not suffer from lack of teaching agriculture and manual training.¹

The vocational education program underwent few changes during Wilson's five years as department head. The department offered a total of fourteen separate courses in 1919. All undergraduate teacher preparation courses in vocational education from 1919 to 1934 are listed in Table 9. Four of these were new--a course in rural education, two teaching methods courses in trades, and a seminar in vocational education. The other ten courses, with the exception of title changes, were carried over from agricultural education. Two courses were added during Wilson's years, only briefly, and then were dropped. Study of High School Home Economics was taught in 1920-1921, and Teaching General Agriculture appeared for only two years from 1921 to 1923. In June, 1921, however, the state

¹The Iowa State College Student, 11 October 1918, p. 2.

Table 9. Undergraduate teacher preparation courses in vocational education, 1919-1934

No.	Course Name	Year														
		1919-20	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34
61a,b	Methods of Teaching Vocational Subjects*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
53	The Industrial High School	X	X	X	X	X	X	X								
357	Administration of Vocational Education**	X	X	X	X	X	X	X	X	X	X	X	X	X		X
358	Rural Education***	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
520	Research in Vocational Education#	X	X	X	X	X	X	X	X	X	X					
54	Principles of Vocational Education	X	X	X	X	X	X	X	X	X	X	X				
65	History of Industrial and Vocational Education##	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
63	Problems of the Junior and Senior High School###	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
309,310	School Administration and Supervision†	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
121a,b	Teaching Home Economics	X	X													
131a,b,c	Teaching Vocational Agriculture	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
130a,b,c	Teaching General Agriculture††			X	X									X	X	

141a,b,c	Teaching Manual Training, Trades and Industries	X X X X	
142	Technique of Teaching Trades	X X X X	
135a,b	Seminar	X X X X X X X X X X X	
125	Study of High School Home Economics	X	
59	Methods and Materials in Nature Study		X X X X X X X
151	Practice Teaching in Industrial Science		X X X X X X
300	Teaching Industrial Science		X X X X X X X X X X
60	Principles of Education		X X X
62	Principles of Secondary Education		X X X

* No. 51 from 1919-1924.

** Prior to 1925 known as Vocational Education; No. 57 from 1919-1931.

*** No. 58 from 1919-1931.

No. 120, Research in Education from 1919-1921; No. 520, Research in Education from 1921-1924.

No. 55, 56 from 1919-1926; No. 55 from 1926-1931.

No. 52a,b, High School Problems from 1919-1931.

† No. 109, 110, from 1919-1932.

†† No. 131d from 1921-1923.

board of education noted that the courses in vocational education at Iowa State College had been "developed to a much greater extent than was expected or desired by the Board when such courses were established."¹ The board further recommended that "the work given in vocational education should be limited to those courses required by law for a first-class teachers' certificate; and that no graduate work should be given."²

During his years as head of agricultural and vocational education at Iowa State College, Guy M. Wilson became a prominent national and international leader in the field of vocational education. In 1918 Professor Wilson went to France to organize instruction in agriculture for American soldiers under the auspices of the Spaulding Commission. Approximately one-half million men in the army were farmers prior to enlistment and since these men were most likely to return to the farm after being discharged, the purpose of the Spaulding Commission was to organize instruction in adult vocational education to better prepare them to return to work.³ Additionally, in 1919, Guy Wilson was asked by P. P. Clayton, U.S. Commissioner of Education, to be a member of a Washington, D.C.

¹Minutes of the Iowa State Board of Education, Vol. IV, May 27, 1921 - March 13, 1924, p. 65.

²Ibid.

³Iowa State College Student, 1 November 1918, p. 3.

board of conference which was preparing a program for the teaching of agriculture on the national level. In 1923 Wilson left Iowa State to accept a position at Boston University as it's first full-time professor in the school of education.

Associate Professor William H. Lancelot succeeded Guy M. Wilson as head of the Department of Vocational Education in 1924. Born in Clayton County, Iowa, on June 18, 1874, Lancelot was a man of practical experience in Iowa's secondary schools. He had served as superintendent of schools at Gray, Iowa, from 1895 to 1898, at Limeville, Iowa, from 1898 to 1903, and at Ackley, Iowa, from 1903 to 1906.

Lancelot came to Iowa State College in 1914 as an instructor in chemistry, received his bachelor's degree from the college in 1919, and became an assistant professor in the newly-created vocational education department. The following year he was promoted to associate professor and, in 1924, became a full professor and head of the department. He later pursued graduate work at Iowa State College, Columbia University, and the University of Chicago, and he received an honorary degree from Miami of Ohio University in 1932.

To a large extent, Wilson and Lancelot were the sources of professional expertise and educational leadership in vocational education at Iowa State College that prompted Dean Curtiss to speak glowingly of the program in 1926. He not only praised the "huge enrollment and splendid work done by

the Education Department," but he also noted that a reality had been made of what "has always been a dream of mine, . . . to see a strong department of Agricultural Education grow up on this campus."¹

Despite the recommendations made by the state board of education to limit offerings to those required for a first class certificate, the Department of Vocational Education continued to expand under Lancelot's leadership from 1924 to 1936. A course entitled Methods and Materials in Nature Study was added from 1923 to 1930, and two new courses in industrial science were added in 1924. In 1931 two courses related to principles of education appeared, and Teaching General Agriculture made another two-year appearance from 1931 to 1933.

The clearest illustration of continued expansion in the department was the addition of a third teacher preparation program beginning in 1928 and continuing through 1938. This program, Agriculture and Science, was designed to prepare men for teaching in the rural and consolidated schools and provided the student with an opportunity to prepare himself to teach several subjects at the secondary level. In addition to a major of 45 hours in agriculture, the program included "two minors of approximately 24 hours each, selected by the student from a list of fifteen such sequences offered by various

¹Iowa State College Student, 26 April 1926, p. 1.

departments of the college."¹ Students completing this program were qualified, therefore, to teach two other subjects in addition to agriculture.

The importance of Iowa State College as a teacher preparation institution in the late 1920s was indicated in an article in the student newspaper. The article stated that teachers prepared at Iowa State were found in a greater number of high schools than teachers educated at the State University, and in only slightly fewer schools than graduates of the State Teachers College.

. . . Iowa State College trained personnel were in 42.7 percent of the high schools of the state, while those graduates from the University of Iowa and Iowa State Teachers College comprised 38.4 percent and 48.4 percent, respectively.²

Also during this year, Iowa State had contributed a greater number of new high school teachers than either of the other two state institutions of higher education.

. . . . In 1928-1929, Iowa State College contributed over 16 percent of Iowa's new high school teachers, while the university contributed 12.1 percent and the teachers college contributed 12.4 percent.³

¹Iowa State College Catalogue, 1928-1929, pp. 257-258. Appropriate minor fields included agriculture (animal husbandry, farm crops and soils, horticulture, or dairy industry), bacteriology, biological sciences, botany, economic science, English, geology, economic history, journalism, manual arts, mathematics, physical education, physics, social science, and zoology.

²Iowa State College Student, 19 January 1932, p. 2.

³Ibid.

While the early depression years provided some hardships for Iowa State students,¹ the Department of Vocational Education continued to prepare a large number of students for teaching. In 1932-1933, 86 percent of the teachers in Iowa's vocational schools were graduates of Iowa State College.²

The department enrolls 1,000 to 1,500 students annually The enrollment of major students in its curricula in agricultural education and agriculture and science varies from 70 to 100 per year. About 120 new graduates are now annually placed as teachers by the Iowa State College. These have taken a major portion of their special preparation for teaching in the department.³

One of the most important aspects of the teacher preparation programs about this time, according to Professor H. M. Hamlin of the vocational education department, was the practice teaching experience. Comparing it to the internship in medicine, Hamlin pointed out that the course was established primarily with the intent of duplicating the diverse responsibilities and duties of actual teaching once the students were duly employed. To this end, participation in community life

¹"According to Professor M. D. Helser, Assistant to the President, many unusual methods of paying registration dues were presented by some of the students Everything from life insurance policies to diamond rings were offered as payment fees One student requested his payment be deferred until his parents could sell their stove wood." Iowa State Student, 25 March 1933, p. 1.

²Twenty-Year Development Program, Part IV, p. 44.

³Iowa State College Student, 19 January 1932, p. 2.

was considered an integral part of the experience. The practice teaching experience

. . . was carried on independently of the college. The only advisors in the teaching are the supervisors in those schools in which the men are working. The faults and mistakes of each are pointed out and remedied as much as possible. At the same time that the boys are doing their work in teaching, they take part in the affairs of the community.¹

By 1932 the teacher preparation program combining agriculture and manual training had been dropped from the department. Instruction in manual training, however, was still being offered at the college within the Department of Industrial Arts.

By April, 1934, many vacancies were reported in Iowa schools for home economics, manual training, and agriculture. One reason for the increased number of vacancies was the fact that some school boards had raised their desired minimum qualifications for vocational teachers. The four-year college graduate was now more of the rule rather than the exception.² Two additional reasons for the increased demand for vocational teachers, and especially vocational agriculture teachers in Iowa, were "the introduction of new departments in the schools and men leaving the field."³ The thrust toward the revitaliza-

¹Ibid.

²Iowa State College Student, 17 April 1934, p. 1.

³Vocational Education, 4 May 1934, Raymond M. Hughes Papers, Box 1, Series 2/8/0/2, Folder: Reports of the Board of Education, Iowa State University Special Collections, Ames, Iowa.

tion of the teaching profession following 1933 can perhaps best be represented by the fact that

Ninety percent of the graduates from four-year curricula in the Department of Vocational Education during the four depression years, 1930-1933, are now employed. Eighty percent of all graduates are in education work.¹

As the teacher preparation program continued to expand at Iowa State College, concern began to be voiced over the fact that the programs were not unified into a composite whole under one department. This matter troubled President Hughes and he spoke to this point in a report to the state board of education in 1933.

Since I have been at Iowa State College, I have been puzzled to work out a plan for the unification of our work in education. We are training a considerable number of teachers in home economics, agriculture, and industrial arts. We are also training . . . teachers in mathematics, physics, chemistry, and zoology. Each piece of work is being done separately, and thus far there has been very little unity in the whole organization, although there has not been much friction.²

In an effort to improve this situation, Hughes established the Committee on Education. Members of this committee included Chairman Lancelot, head of the vocational education department;

¹Iowa State College Student, 16 June 1934, p. 3.

²A Report to the Board of Education, 7 December 1933, Raymond M. Hughes Papers, Box 1, Series 2/8/0/2, Folder: Board of Education 1928, 1932-33, Iowa State University Special Collections, Ames, Iowa.

Professors William Hunter, Cora Miller, and William Evans of the same department; and, Charles E. Friley, Dean of the Division of Industrial Science. The major goal of this committee was to submit recommendations to President Hughes concerning the best way to unify the teacher education program within the college as well as ways in which to "strengthen our ability to handle our educational work in an intelligent and effective way."¹

On September 10, 1934, President Hughes submitted a report to the state board of education, which was apparently based in part on the findings of the Committee on Education.

It is essential under the laws of the state that one member of the college staff be responsible to the Superintendent of Public Instruction for the technical training of all of these people. At the same time there is considerable difficulty in keeping harmony and unity in this work. It does not seem to me to be feasible or desirable to set up a College of Education with a dean, but for the past seven years I have not been able to unify this work sufficiently through the head of the Department of Vocational Education under that title. I would now recommend that the title of W. H. Lancelot, Professor of Vocational Education and head of the department, be changed to Director of Teacher Training and Head of the Department of Vocational Education. This will not alter the general organization except that it will give him a title under which he can more effectively unify the work in teacher training.²

¹Ibid.

²Minutes of the Iowa State Board of Education, Vol. XI, September 14, 1934 - October 18, 1935, p. 18.

Lancelot, shortly thereafter, also commented on the problems arising from the vocational education department's service relationship to other departments and the fact that teacher training courses were being offered by several different departments. He noted that

. . . teachers do not, as a rule, have any knowledge of what is being taught in other courses of the sequence, and there is abundant opportunity for incoherent and even contradictory and therefore confusing professional instruction to be given. There can be no doubt that this has occurred more or less frequently in the past or that the effectiveness of the professional training for prospective teachers provided by our institution has been greatly impaired by it.¹

The recommendation of President Hughes was referred by the state board of education to the presidents of the three state institutions of higher education for their consideration and final recommendation to the board. On October 2-3, 1934, the recommendation as originally set forth by Hughes was approved by the board.² Subsequently, Professor William H. Lancelot was accorded the title of Director of Teacher Training and Head of the Department of Vocational Education.

¹W. H. Lancelot, Vocational Education, Twenty-Year Development Program, Part II (Ames, Iowa: Iowa State University, 1935), p. 128.

²Minutes of the Iowa State Board of Education, Vol. XI, p. 151.

In 1934 the Department of Vocational Education organized its work into several fields rather than listing all courses only under the heading of vocational education. These fields included: agricultural education, vocational education, home economics education, industrial arts, industrial science, physical education, and psychology. At this time four new courses appeared in the field of agricultural education. These included both a junior and senior forum in agricultural education, and two courses dealing with village and consolidated schools--one in administration and one in supervision. All undergraduate teacher preparation courses in the field of agricultural education from 1934 to 1941 are listed in Table 10. The vocational education program, however, did not have any course additions at this time.

In a 1935 report Lancelot noted that although the department continued to perform a coordinating function, its primary responsibility was preparing its own graduates as teachers of agriculture and as competent administrators of consolidated and village school systems.

While the department acts as both an instructional and coordinating agency with respect to the preparation of graduates of other departments for teaching, its responsibility in connection with the training of its own graduates, virtually all of whom become high school teachers or public school administrators, is of course far greater.¹

¹Twenty-Year Development Program, Part II, p. 122.

Table 10. Undergraduate teacher preparation courses in agricultural education, 1934-1941

No.	Course Name	Year						
		1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41
301, 302, 303	Junior Forum in Agricultural Education	X	X	X				
401, 402, 403	Senior Forum in Agricultural Education	X	X	X				
501, 502, 503	Teaching Vocational Agriculture	X	X	X				
521, 522, 523	Teaching General Agriculture	X	X	X	X	X		
544	Administration of Village and Consolidated Schools	X	X	X	X	X		
545	Supervision of Rural Elementary Education*	X	X	X	X	X		
211	Observation and Survey of Agricultural Education				X	X	X	X
307	Special Methods of Agricultural Education				X	X	X	X
424, 425	Observation and Practice Teaching in Agriculture				X	X	X	X
431	Special Problems in Agricultural Education				X	X	X	X
437	Rural Educational Services				X	X	X	X
536	Adult Education				X	X	X	X
537	Methods of Teaching Adults				X	X	X	X
538	Part-Time Education in Agriculture						X	X
590	Special Topics						X	X

*Known as Supervision of Village and Consolidated Schools from 1934-1937.

In 1937 Professor Barton Morgan replaced Lancelot as Head of Vocational Education and Director of Teacher Training. Lancelot requested leave from his administrative duties because of poor health but remained on the teaching staff in the department. Professor Morgan received his B.S. from Northwest Missouri State Teachers College in 1919, his M.S. in 1922 from Iowa State College, and his Ph.D. from the State University of Iowa in 1934. Morgan had joined the vocational education department at Iowa State in 1923 as an instructor with an annual salary of \$2,500.¹

During the first year under Barton Morgan, curricula in the fields of both agricultural education and vocational education expanded greatly. Seven new courses were added in agricultural education while three were dropped resulting in a net gain of four courses. Four new courses appeared in vocational education. All undergraduate teacher preparation courses in vocational education from 1934 to 1941 are listed in Table 11.

In 1939 Morgan's title was changed to Head of the Department of Vocational Education and Director of Teacher Education. Curricular changes occurred in both agricultural education and vocational education. Two new courses, Part-Time Education in

¹Interview with Barton Morgan, Professor of Education (retired), Iowa State University, Ames, Iowa, 18 September 1974.

Table 11. Undergraduate teacher preparation courses in vocational education, 1934-1941

No.	Course Name	Year						
		1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41
304	Principles of Education	X	X	X	X	X	X	X
305	Methods of Teaching Vocational Subjects	X	X	X	X	X	X	X
426	Principles of Secondary Education*	X	X	X	X	X	X	X
554	Administration of Vocational Education	X	X	X	X	X	X	X
584	History of Vocational Education**	X	X	X	X	X	X	X
534	Administration of the Guidance Program				X	X	X	X
535	Evaluation of Educational Outcomes***				X	X	X	X
542	Administration of Village and Consolidated High Schools#				X	X	X	X
547	Supervision of Rural Secondary Education#				X	X	X	X
404	The High School Pupil						X	X
431	Special Problems##						X	X
552	Educational Statistics						X	X
544	Administration of Village and Consolidated Schools						X	X
545	Supervision of Rural Elementary Education						X	X
561,562	Problems in Educational Method						X	X
565	Curriculum Construction						X	X
590	Special Topics###						X	X

*Course No. 306 from 1934-1937.

**Known as History of Industrial and Vocational Education from 1934-1937.

***Administration of the Testing Program from 1934-1940.

#Not associated with a particular field from 1937-1939.

##Special Problems includes: Agricultural Education, Vocational and Educational Guidance, Curriculum Construction, Principles of Education, and Methods of Teaching.

###Special Topics includes: Agricultural Education, Industrial Arts Education, Adult Education, Secondary Education, Vocational and Educational Guidance, Administration, and Supervision.

Agriculture and Special Topics, were added to the agricultural education program and Teaching General Agriculture was dropped. The two courses in administration and supervision of village and consolidated schools were transferred to the field of vocational education, and six additional courses became a part of this field of study.

In 1939 the Department of Vocational Education administered only one curriculum--agricultural education. Also at this time, specific mention of the department's role with respect to curricula in home economics and industrial arts was no longer made. Courses in home economics, industrial arts, physical education, psychology, the sciences, English, history, and mathematics no longer appeared in the Catalogue under the vocational education department listings¹ but only in their individual departments. Beginning in 1941 the department began to administer the curriculum in industrial education and continued to provide agricultural education.

Trades and industries

The Division of Engineering, headed by Dean Anson Marston, offered a new program entitled Manual Training, Trades and Industries in 1919. This program was specifically

¹The practice of listing courses under both the individual department and vocational education had commenced as early as 1920 with respect to courses in home economics and had later spread to courses in other departments.

. . . designed to meet the demands for supervisors of manual training in the secondary schools, especially the consolidated schools and to provide teachers in the Trades and Industries of the vocational schools established under the Smith-Hughes Act.¹

Initially, this program required the completion of nine hours in psychology and twenty-one hours in education. In 1921 the education requirement was raised to 24 hours, and by 1926, when the trades and industries course merged with that of industrial arts, (which had been established in 1924), 12 hours of psychology and 33 hours of education were required for graduation.

During the first year of this program, the Department of Trades and Industries offered only two teacher preparation courses--Elementary Vocational Drawing and Advanced Vocational Drawing. Table 12 lists all undergraduate teacher preparation courses offered by the Department of Trades and Industries from 1919 to 1928. Throughout this period the technical work needed by prospective teachers was organized in the department, while the teacher preparation courses were provided by the vocational education department.

In 1920 Dean Marston relinquished the headship of the trades and industries program and was replaced by Kenneth G. Smith. Under his leadership six new teacher preparation courses were added to the program. In 1921 Smith was replaced

¹Iowa State College Catalogue, 1919-1920, p. 243.

Table 12. Undergraduate teacher preparation courses in trades and industries, 1919-1928

No.	Course Name	Year									
		1919-20	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28	
1	Elementary Vocational Drawing	X	X	X	X	X	X	X	X	X	X
2	Advanced Vocational Drawing	X	X	X	X	X	X	X	X	X	X
14	Studies in Elementary Shop Work		X	X	X	X	X	X	X	X	X
15	Vocational Woodwork		X	X	X	X					
17	Shop Planning and Organization		X	X	X	X	X	X	X	X	X
16	Auto Mechanics for Vocational Teachers		X	X	X	X	X	X	X	X	X
20	Lectures and Demonstrations		X	X	X	X	X	X	X		
141	Studies in Vocational Education		X	X	X						
141a,b,c	Teaching Manual Training, Trades and Industries						X	X	X	X	X
143	Supervised Teaching in Manual Training, Trades and Industries						X	X	X		
45	Industrial Guidance									X	X
142a	Technique of Teaching Trades						X	X	X	X	X
142e	Organization and Administration of Industrial Education						X	X	X	X	X

by Adolph Shane. Shane received his B.S. from the University of Nebraska in 1901. He subsequently taught at the Agricultural and Mechanical College of Oklahoma and the University of Pennsylvania. In 1904 he came to Iowa State as assistant professor of electrical engineering and, in 1908, completed his masters degree in electrical engineering. Shane remained as head of the department through most of 1928.

Under Professor Shane the major goals of the trades and industries program were expanded. The course of study now had a dual purpose. The development of marketable skills and an understanding of industry was secondary to the development of

. . . really high grade teachers of technical and industrial subjects and also administrators in vocational and industrial schools, especially those established under the Smith-Hughes Act; . . .¹

As a part of his professional preparation, each student who majored in trades and industries was expected to spend his summer vacation either working in an industrial complex or teaching industrial classes at an educational institution. In addition, the course sequence of the program was offered in such a way as to accommodate those students who wished to teach after only two years of collegiate work. In such cases, a teaching certificate was awarded.

¹Iowa State College Catalogue, 1921-1922, p. 193.

In 1924 the Department of Trades and Industries introduced a new four-year program in industrial arts. This program provided

. . . training for teachers of manual training in Iowa. Its aim is to not only prepare teachers for junior and senior high schools, but also to equip the teacher for the work of the schools in the smaller communities.¹

Four new courses--three related to methods of teaching and one in organization and administration--were added at this time. This program was also arranged so that a student wishing to teach after completing two years could do so. Graduation from the four-year industrial arts program entitled the student to a first grade certificate without a written examination.

The programs in both trades and industries and industrial arts were offered for only a two-year period from 1924 to 1926. During these years the courses of study were very similar in scope and content. The industrial arts course, however, required six additional hours in education. These education credits were composed of three credits for Administration of Industrial Education and three credits for Technique of Teaching Trades. Both programs required 11 hours in psychology.

Beginning in 1926-1927 the Department of Trades and Industries offered only the program in industrial arts, which was intended

¹Iowa State College Catalogue, 1924-1925, p. 224.

. . . to prepare teachers and administrators in vocational and industrial schools, especially those established under the Smith-Hughes Act.¹

In addition to completing the required work a student could elect a total of 34 credits. This provision enabled the student to prepare himself in additional teaching areas. A choice of electives gave the student

an opportunity to specialize in those subjects which appeal to his interests and talents. Through these he may prepare himself to teach agriculture, mathematics, or science or prepare for the coaching of amateur sports.²

By 1928 Iowa State College had also instituted a formal two-year course in industrial arts which was specifically designed to prepare students for a teaching position and certificate after two years residence and the completion of nine hours in both education and psychology.

Industrial arts

At the beginning of the 1928-1929 academic year, the Department of Trades and Industries became the Department of Industrial Arts with Adolph Shane continuing as the head of the department. The courses offered the previous year in trades and industries were continued, and six new courses were added. Both the two-year and the four-year programs were

¹Iowa State College Catalogue, 1926-1927, p. 227.

²Iowa State College Catalogue, 1928-1929, p. 205.

continued. Shane continued as department head until 1932 when William L. Hunter succeeded him. The purpose of the program in industrial arts under Shane remained identical to that of previous years. The number of hours in electives, however, was reduced to 32.

Between 1928 and 1940 the industrial arts department offered at various times a total of 19 undergraduate courses specifically relating to the preparation of industrial arts teachers. These courses and the years each was offered are listed in Table 13. The work provided preparation in a variety of areas including vocational drawing, planning and equipping a school shop, specific teaching methods courses, and organization and administration of industrial arts and industrial education.

By 1932 a shift in curricular emphasis with regard to non-teacher preparation courses had taken place. This change occurred as a result of a study conducted by the department with regard to the relevancy of courses as evaluated by graduates of the program. The majority of the alumni surveyed indicated that they felt there was an overemphasis on wood-working. Such courses

. . . were valuable when industrial arts in the public schools was nothing more than 'manual training' of the woodworking variety. . . . [Now] the more progressive junior high schools of the state are including courses

518	Problems in Industrial Education	X X X X X
525	Problems in Part-Time Education	X X X X X
590B	Special Topics	X X

*No. 14, Studies in Elementary Shopwork from 1928-1932; No. 14, Elementary Teaching Problems in Industrial Arts from 1932-1934.

**Shop Planning and Organization from 1928-1932; No. 17 from 1928-1934.

***No. 45 from 1928-1934; Industrial Guidance from 1928-1936.

#No. 47, Organization and Administration of Manual Arts from 1928-1934.

##No. 140 from 1928-1934; No. 308 in 1934-1935; No. 318 from 1935-1938.

###No. 141a,b, Teaching Manual Training, Trades and Industries from 1928-1934.

†No. 142a from 1928-1934.

††No. 49 from 1932-1934.

†††No. 70 from 1932-1934; No. 408 from 1934-1938.

*No. 47, Organization and Administration of Manual Arts from 1928-1934.

in metal working, electricity, cement work,
and machine work.¹

As a result of the study, woodworking was de-emphasized and new courses in general shop and metal working were incorporated into the curriculum. The study also influenced the addition of four courses related to teacher preparation.

Several courses of especial value to teachers such as an additional course in vocational education, two in sociology, and one in hygiene . . . [were] added.²

Even though the industrial arts curriculum underwent a name change in 1940 from industrial arts to industrial education, the curriculum continued under the direction of the Department of Vocational Education. In the spring of 1939, following the death of William L. Hunter, head of industrial arts, a committee was appointed by President Charles E. Friley to examine the scope and objectives of the industrial arts program. It had been President Friley's contention, along with other college administrators, that the program should no longer be under the direction of the Division of Engineering, but should be under the jurisdiction of the Vocational education department. This committee, which was composed of Dean T. R. Agg, chairman, Professor Barton Morgan, Dean R. E. Buchanan, and Professor A. P. Twogood, examined the mission and objectives of the industrial arts program. After

¹The Iowa State Student, 25 February 1932, p. 2.

²Ibid.

determining that the program primarily prepared its majors for teaching in the secondary schools and not for industry or industrial-related occupations, the committee recommended that the program be transferred from the Division of Engineering to the Division of Agriculture and be administered by the Department of Vocational Education.¹ Not only were the majority of industrial arts students entering teaching, but the term "industrial education" rather than "industrial arts," more appropriately described the work going on in the curriculum--the training in industrial arts and the work which took place in the trades and industries program.² On June 8, 1939, President Friley recommended to the Iowa State Board of Education that both the undergraduate and graduate programs in industrial arts be incorporated into the Department of Vocational Education and designated as a major field of study in that department.³

In 1940-1941 the Department of Industrial Arts, as a separate department with its own head, ceased to exist. Work in this field was redefined as a curriculum in the field of

¹Interview with Lowell L. Carver, Ames, Iowa, 30 April 1975.

²Interview with Ray J. Bryan, Professor-in-Charge of Professional Studies, Iowa State University, Ames, Iowa, 25 March 1975.

³Minutes of the Iowa State Board of Education, Vol. XIV, July 1, 1938 - July 1, 1939, p. 426.

industrial education and was administered in its entirety within the Department of Vocational Education under the direction of its head, Barton Morgan. The basic program, however, remained unchanged.

Industrial science

Although the Department of Industrial Science had offered a four-year program in industrial science throughout this period, it was apparently not until 1930 that teacher preparation was considered one of the aims of the program. At this time the Catalogue noted that

by a proper choice of electives and supporting subjects the industrial science course may serve as a preparation for teaching science in the secondary schools and colleges.¹

The freshman and sophomore years of the industrial science course were devoted to the study of broad general subjects. During the junior and senior years the student concentrated in selected areas of specialization by choosing a major and two minor fields of study.

The first practice teaching course in this field, Directed Observation and Practice Teaching in the Sciences, which was listed in the Catalogue under both the industrial science department and the vocational education department, appeared in 1937 and was taught continuously through 1941.

¹Iowa State College Catalogue, 1930-1931, p. 225.

In 1939 the Division of Industrial Science became the Division of Science and the curriculum was redesignated as a Curriculum in Science. Two new courses--Methods of Teaching Science and Methods of Teaching Social Studies--were added to the division's offerings at this time. They did not appear in the list of courses offered by the vocational education department. Thus, three teacher preparation courses were offered by the Division of Science through the Curriculum in Science during the last two years of this period.

Physical education

Physical education for men¹ The men's physical education department functioned within the Division of Industrial Science and was under the leadership of T. Nelson Metcalf from 1924 to 1933 and, later, George F. Veenker from 1933 to 1946. The major focus of the department during these years was on the provision of activities designed to enhance the physical welfare of the male student body. The poor physical condition of World War I recruits had attested to the necessity of improving physical education programs throughout the nation after the war. To this end, basic activities courses were required for all freshmen and sophomores. These courses also formed the basis for teacher preparation programs.

¹Prior to 1925 known as Physical Training for Men.

Although the department recognized the need to provide preparation for teachers, no major program was initiated until 1930. Prior to 1930 students preparing to teach simply elected courses from departmental offerings. From 1917 until 1922 the department offered prospective teachers courses in the theory and practice of coaching. Table 14 lists all undergraduate teacher preparation courses in men's physical education from 1917 to 1941. This work covered a wide range of topics including the theory of play, sportsmanship, rules, training, anatomy, physiology, hygiene, and actual competition and coaching. In 1922 courses in the theory and practices of measurements, the theory and practice of physical training, and the organization and administration of a department of physical training were added by the department. Of these three, however, only the latter remained after 1924-1925. The reason for the existence of any teacher preparation work during these years was clearly stated by the department.

Many requests are received for teachers in general and applied science who have had more or less physical training and work in athletics. Those who are preparing to teach may elect work specially adapted to their needs.¹

In 1925 the department became known as Physical Education for Men, and departmental offerings were again expanded with the addition of courses in playground supervision, minor

¹Iowa State College Catalogue, 1917-1918, p. 318; Iowa State College Catalogue, 1924-1925, p. 215.

Table 14. Undergraduate teacher preparation courses in men's physical education,^a 1917-1914

No.	Course Name	Year	
		1917-18	1918-19
314, 315, 316, 317*	Coaching of Athletic Sports	X	X
30a,b,c	Physical Training		
40a,b,c	Physical Training		
493***	Organization and Administration		
309#	Athletic Training		
25a,b,c	Minor Sports		
322##	Playground Supervision		
13a,b,c	Advanced Leaders		
35a,b,c	Gymnastics		
34	School Gymnastics		
106,107,108###	First Aid to the Injured		
17a,b,c	Athletic Officiating		
424†	Special Problems		
18a,b	Theory and Practice of Athletic Sports		
304,305,306††	Physical Education Technique		
491	Principles of Physical Education		
492	Methods of Teaching Physical Education		
411,412,413†††	Supervised Teaching in Physical Education		

^aPrior to 1925 known as Physical Training for Men.

*No. 5 and 6, Major Sports from 1917 to 1919; No. 12a,b,c, Theory and Practice of Coaching from 1919 to 1925; No. 12a,b,c, d from 1925 to 1931; No. 12a,b,e,d, Coaching of Athletic Sports from 1931-1934.

**Physical education courses required for physical education major in combination with another science.

***No. 32, Physical Training from 1922 to 1925; No. 32, Organization and Administration from 1925 to 1930; No. 332 from 1930 to 1933; No. 335 in 1933-1934.

#No. 14, Physical Training from 1924 to 1925; No. 14, Athletic Training from 1925 to 1934.

##No. 22 from 1925 to 1930.

###No. 16 from 1928 to 1934.

†No. 36, Special Problems from 1929 to 1933; No. 424, Special Topics from 1934 to 1939.

††No. 19a,b,c from 1933 to 1934.

†††No. 350a, 350b, 350c in 1933-1934.

sports, gymnastics, and squad leadership. A total of six separate courses was offered, and the work in both major and minor sports included consideration of different activities each quarter. Departmental courses were now "designed especially for men who are preparing to teach physical education or coach athletic teams."¹ Completion of 18 hours of electives in physical education entitled the student to a provisional certificate in physical education.

Between 1926 and 1930 students who desired to qualify for a first grade state certificate and to coach athletics in addition to other teaching were required to pursue a more specific course of study. Nine hours in psychology and twenty-one hours in education were to include specific courses in psychology, vocational education, and special methods in the major subject area. In addition, a student was to complete Physical Education 32, 12a, 12b, 12c, 12d, and 22 (6-9 hours).²

In 1930 a major program was introduced whereby a student could combine a major in physical education with a major in another science within the Division of Industrial Science. No new courses, however, were added to the department at this time. Professor Metcalf stated the reason for the introduction of a major program.

¹Iowa State College Catalogue, 1925-1926, p. 207.

²Iowa State College Catalogue, 1929-1930, p. 241.

The major is being offered to meet the demands for high school instructors who can teach one of the sciences and handle coaching and physical education at the same time.¹

During the years from 1930 to 1933 specific physical education courses were designated for inclusion in the major sequence. As noted in Table 14 these included Coaching of Athletic Sports, Playground Supervision, Organization and Administration, Theory and Practice of Athletic Sports, and Advanced Leaders. Beginning in 1933 and continuing until 1941, the only course specified for the combined major was Physical Education Technique, an advanced skills course. The remainder of the program was to be worked out by the individual in consultation with the head of the department. Although the combined major program continued, departmental course offerings decreased from nine in 1933-1934 to only four in 1940-1941. It was during 1940-1941 that three courses--Organization and Administration, Principles of Physical Education, and Methods of Teaching Physical Education--were designated to be offered in alternate years and not in 1940-1941. The Coaching of Athletic Sports, also relegated to an alternate year schedule, was offered in 1940-1941.

Physical education for women² During the years from 1917 to 1941 the women's physical education department remained

¹The Iowa State College Student, 22 September 1930, p. 15.

²Prior to 1920 known as Physical Culture for Women.

within the Division of Home Economics. A major function of the department was to provide courses in team and individual sports as well as dance activities. All women students were required to select activities courses during their freshman and sophomore years. In addition, the department offered a number of specific teacher preparation courses and two, separate major sequences for teachers.

Teacher preparation courses in women's physical education grew in number from two in 1917 to a high of eight during the years from 1926 to 1928, then gradually decreased until only a single course remained in 1941. Winifred R. Tilden, having served as both associate professor and professor of physical culture, was named head of the department in 1923 and held this position throughout the period. A 1905 graduate of Mount Holyoke College, Miss Tilden was "a dynamic, enthusiastic person whose innovations at Iowa State made traditions for the College," and it was largely through her efforts that "Iowa State College was well in the lead in physical education for women in the early twenties."¹

Prior to 1919 there was no specific course sequence designed to prepare women teachers in physical education. However, the course entitled Play and Playground was designed to prepare "directors of organized play and athletics for home,

¹Eppright and Ferguson, pp. 121-123.

rural, municipal and school playgrounds."¹

Beginning in 1919, without adding any new courses, the women's physical culture department offered a major sequence which combined work in home economics and physical education. Physical education courses which were required for this major as well as all other nonactivity, undergraduate teacher preparation courses in women's physical education offered between 1917 and 1941 are listed in Table 15. Students who wished to specialize in home economics and physical education were required to elect a prescribed sequence of courses during their junior and senior years. Throughout the fourteen year period during which time this program was offered, courses in first aid and methods of teaching physical education were required. In 1932 first aid was dropped from the women's department, but the men's course in first aid was opened to women. Courses relating to the supervision of playgrounds and playground activities were required from 1919 to 1925 and again from 1929 to 1933. Students completing this program were qualified to teach both home economics and physical education in Iowa's secondary schools.

For a brief period between 1930 and 1933 the women's department offered a major course in industrial science which combined a major in physical education with a major in another

¹Iowa State College Catalogue, 1918-1919, p. 288.

Table 15. Undergraduate teacher preparation courses in women's physical education^a, 1917-1941

No.	Course Name	Year		
		1917-18	1918-19	1919-20
305*	Playground	X	X	X
195***	Organization of Playgrounds and Recreation Programs	X	X	X**
196	Theory and Practice of Corrective Gymnastics		X	X**
198	First Aid and Physical Diagnosis		X	X**
197#	Methods of Teaching Physical Education		X	X**
327##	Theory and Practice of Coaching		X	X
301	Recreation for the Pre-School Child			
326###	Recreational Leadership			
328†	Special Problems in Teaching Physical Education			
307	Recreational Leadership			

^aPrior to 1920 known as Women's Physical Culture.

*No. 5 and 6, Play and Playground from 1917-1919; No. 192a, 192b, 192c, Play and Playground from 1919-1927; No. 192a, 192b, 192c, Playground from 1927-1933; No. 5, Playground, 1933-1934.

**Physical education courses required for home economics and physical education combined major, 1919-1933.

***No. 9 and 10, Organization of Playgrounds and Community Festivals 1917-1918; No. 9, Organization of Playgrounds and Community Festivals, 1918-1921.

#No. 26 from 1918-1919; No. 197a, 197b from 1919-1921; No. 197 from 1921-1924; Methods and Practice Teaching in Gymnastics, 1918-1921; Methods of Teaching Gymnastics, 1924-1928.

##No. 204 from 1922-1933; No. 6 in 1933-1934; No. 307 from 1934-1936.

###No. 300, Campfire from 1924-1933; No. 8 in 1933-1934; No. 306 from 1934-1936; Recreational Leadership and Campfire from 1937-1939.

†No. 205 from 1927-1933; No. 7 in 1933-1934; No. 308 from 1934-1936.

						X	X**	1920-21
						X	X**	1921-22
						X	X**	1922-23
						X**	X**	1923-24
		X	X			X	X**	1924-25
		X	X			X	X	1925-26
	X	X	X			X	X	1926-27
	X	X	X			X	X	1927-28
	X**	X	X			X	X	1928-29
	X	X	X			X	X**	1929-30
	X	X	X			X	X**	1930-31
		X	X**			X	X**	1931-32
		X				X	X**	1932-33

science. In addition to basic physical education activities classes, students were required to elect 12 credits from Physical Education 192, 197, 198, 204, 300, and 307 and take advanced classes in rhythms, posture training, gymnastics, and dance. Supporting work was to be taken in chemistry, hygiene, zoology, psychology, and vocational education. Upon completion of this course graduates were eligible for a first grade state certificate and could serve as physical education directors in approved Iowa schools.¹

As Table 15 illustrates, the women's physical education department also offered several courses in addition to those required for these two specific programs. These courses offered during various years were in the areas of recreation for the pre-school child, special problems in teaching physical education and recreation leadership.

In 1935 Winifred R. Tilden noted that while many Iowa State College graduates were teaching recreation and physical education in Iowa schools, few had been adequately trained. She suggested, therefore, that

. . . it is imperative that this department be permitted to offer very definite training in teaching fundamentals of gymnastics and rhythm and also game skills and technique that may be used in secondary schools; to offer a course in coaching athletics; and to offer

¹Iowa State College Catalogue, 1930-1931, p. 249.

training in extracurricular activities such as campfire and recess playground supervision.¹

Despite this report the number of departmental offerings declined after 1935 until only a single course remained in 1940-1941.

Additional teacher preparation courses

Nine different departments within the Division of Industrial Science²--English, History, Hygiene, Public Speaking, Mathematics, Botany, Chemistry, Physics, and Zoology--provided at least one teacher preparation course at some time during the years from 1917 to 1941. Undergraduate teacher preparation courses offered by these departments from 1919-1941 are listed in Table 16. Although the Department of Music and the School of Music had offered teacher preparation work in previous years, no courses for prospective teachers were offered in music during this period. The modern education may be puzzled by such a proliferation of methodology courses, but they made sense for the small schools of Iowa during this period. Teachers often taught in three or four areas; superintendents teaching two or three preparations and coaching were common as late as 1950.

¹Iowa State College, Twenty-Year Development Program (Ames, Iowa: Iowa State College), 1935, p. 78.

²The Division of Industrial Science became the Division of Science in 1939.

Table 16. Additional undergraduate teacher preparation courses, 1919-1941

No.	Course Name
394	The Teaching of English*
300	Methods of Teaching the Social Sciences**
11	Health Education***
404	School Health Problems#
484	Health Education
26a,b	Story Telling##
497	Teaching Vocational Mathematics in Junior and Senior High Schools###
494	Methods of Teaching Botany†
255	Nature Study
300	Teaching Chemistry
498	Teaching Physics††
301,302,303	General Physics†††
499	Methods of Teaching Animal Biology and Physiology†

*No. 254 from 1919-1924; No. 300 from 1924-1926; No. 300a, b from 1926-1934.

**Known as Methods of Teaching the Social Studies in 1934-1935.

***Known as School Sanitation and Hygiene from 1928-1930.

#Known as Applied Hygiene from 1934-1939.

##No. 26 from 1928-1933.

###No. 300 from 1928-1934

†No. 300 from 1928-1934.

††No. 300 from 1928-1934.

†††No. 107a,b,c from 1926-1933; No. 307a,b,c from 1933-1934.

†No. 300 from 1928-1934.

										X	1919-20	
										X	1920-21	
										X	1921-22	
										X	1922-23	
										X	1923-24	
									X	X	1924-25	
									X	X	1925-26	
X	X								X	X	1926-27	
X	X								X	X	1927-28	
X	X	X	X		X	X			X	X	X	1928-29
X	X	X	X		X	X			X		X	1929-30
X	X	X	X		X	X			X	X	X	1930-31
X	X	X	X		X	X			X		X	1931-32
X	X	X	X		X	X			X	X	X	1932-33
X	X	X	X		X	X			X		X	1933-34
X	X	X			X	X		X		X	X	1934-35
X	X	X			X	X			X		X	1935-36
X	X	X		X	X	X			X	X	X	1936-37
X	X	X		X	X	X			X		X	1937-38
X	X	X		X	X	X			X	X	X	1938-39
	X			X		X			X		X	1939-40
	X			X		X			X		X	1940-41

Year

In 1919 the Department of English, under the direction of Alvin B. Noble, offered a course entitled The Teaching of English, 254, which was primarily "for Home Economics students who wish to prepare themselves to teach English in addition to Home Economics."¹ This course apparently replaced Readings for Children at Home and at School, 232, which had been offered from 1916 to 1919. The Teaching of English was renumbered English, 300, in 1924 and, in 1926, was divided into Teaching of American and English Classics, 300a, and the Teaching of English Composition, 300b. In 1934 this course again became a single course, The Teaching of English, 394, and was taught yearly through 1940. It provided instruction for the student in methods of teaching both literature and composition.

The history department furnished advanced work for those who needed a more thorough knowledge of history for teaching.² Also, by 1924, the history department offered Methods of Teaching the Social Sciences, 300. Beginning in 1929 and continuing until 1939, (after which it no longer appears in the Catalogues), this course was offered in alternate years. A basic methods course, it considered "methods of teaching history, government, economics, and sociology in high school."³

¹Iowa State College Catalogue, 1919-1920, p. 175.

²Iowa State College Catalogue, 1923-1924, p. 154.

³Iowa State College Catalogue, 1933-1934, p. 193.

This course became Methods of Teaching the Social Studies in 1934, and content was extended to include the junior college as well as the high school. In 1935 the title reverted back to Methods of Teaching the Social Sciences, and this course was taught in the history department until 1939, after which it appeared in the Department of Science under the same title.

The Department of Hygiene offered three courses related to teacher preparation. Beginning in 1928 the hygiene department, under the direction of Professor J. F. Edwards, offered School Sanitation and Hygiene; no course description was offered. In 1930 this course became Health Education, 11, and was offered until 1934. Beginning in 1934 Applied Hygiene, 404, was added to the department. Initially emphasizing school and industrial hygiene, this course between 1937 and 1939 stressed "hygiene of the school, health of the teacher and students."¹ Retitled School Health Problems in 1939, the course was specifically directed toward those preparing to teach high school subjects. In 1940-1941 correlation of health education in the curriculum was also made a part of the course content. Health Education, 484, was added to departmental offerings in 1938 and continued through 1940. Instruction focused on a

¹Iowa State College Catalogue, 1937-1938, p. 280.

review of educational principles relating to . . . teaching units in Home Care of the Sick and Infant Care for the high school age level. Demonstration and practice teaching with a ninth grade group.¹

The Department of Public Speaking offered Story Telling, 26, from 1928 through 1932 when the course was divided into two parts, 26a and 26b. In 1933 and 1934, 26a focused on the "types of literature suitable for children, principles of selection and adaption for telling," while 26b concentrated on "fundamental techniques of story telling; practice in class before groups of children."² In 1935 these courses were dropped and were not offered again during this period.

The Department of Mathematics offered Teaching Vocational Mathematics in Junior and Senior High Schools between 1928 and 1933. The emphasis of this course was on the inclusion "of several practiced aspects of teaching mathematics such as organization of subject matter, methods of presenting typical topics, and tests for measuring results."³ In 1934 this course was renumbered Mathematics, 497, and, retaining the same course description, was offered through 1940.

The Department of Botany offered Methods of Teaching Botany, 300, from 1928 through 1933. In 1934 this course

¹Iowa State College Catalogue, 1938-1939, p. 280.

²Iowa State College Catalogue, 1933-1934, p. 254.

³Iowa State College Catalogue, 1928-1929, p. 221.

became Botany, 494, and was taught through 1939. The botany department also offered a course entitled Nature Study, 255, from 1936 through 1940. Although this course had been offered in years prior to 1936, it was not until that year that the catalogue description contained a reference to teaching.

Beginning in 1936 the course description read as follows:

"Materials, methods, aesthetic and economic aspects of plant life; for public school teaching. Plants in legend and folklore and their use by Indians and pioneers."¹

Between the years 1928 and 1934 the chemistry department offered Teaching Chemistry, 300, which was taught by Professor Frank E. Brown. The course dealt with the "methods of presentation and study of subject matter supported by class and laboratory demonstrations."²

The Department of Physics offered two separate courses during this period. The department offered Teaching Physics, 300, from 1928 through 1933, but no description accompanied the course listing during these years. In 1934 the number was changed to Physics, 498, and the course was designed

to acquaint prospective teachers with the recent educational advances in methods as they apply to the teaching of physics. [Also included was] a study of the content of high school physics, and practice in presentation of various topics.²

¹Iowa State College Catalogue, 1936-1937, p. 135.

²Iowa State College Catalogue, 1934-1935, p. 267.

This course was offered through 1938-1939. From 1926 through 1940 the Department of Physics offered a course of General Physics. Throughout these years the descriptions in the Catalogues noted that the work in this course was "sufficiently fundamental to afford thorough training for teachers."¹

The summer quarter²

Under the directorship of G. M. Wilson, summer session work at Iowa State College from 1917 to 1922 remained primarily on sub-collegiate and undergraduate levels. Special arrangements could be made, however, for advanced work. Although the number of regular college students had begun to increase in 1916, the summer program continued to be directed primarily toward present and prospective teachers, school administrators (superintendents, principals, and supervisors), and graduates of Iowa State who sought to complete the nine hours in psychology and the twenty-one hours in education which were required for a first grade state certificate.

Directly in response not only to passage of the Smith-Hughes bill but also responding to recent state legislation, Iowa State College instituted new courses in agricultural education, agricultural engineering, and home economics during the summer of 1917.

¹Iowa State College Catalogue, 1940-1941, p. 335.

²Prior to 1930 known as the summer session.

The recent legislation with reference to state-aided high schools, consolidation of schools, the teaching of agriculture, home economics and manual training in the public schools, as well as the provisions relating to the twelve weeks and six weeks of professional training, have had much to do with the shaping of courses for the summer session, and the work is so organized as to meet legal provisions. Agriculture, home economics, and manual training are the subjects in which the Iowa State College is, of all institutions in the state, best prepared to help teachers.¹

Initially, summer work in these newly required areas was "designed particularly to help teachers in getting vocational courses adapted to school use."² Summer announcements for 1918 were specifically directed toward teachers who sought to qualify themselves under Smith-Hughes regulations and, in fact, the Catalogue for 1918 noted that "the entire work of the Summer Session centers around the preparation of teachers of vocational subjects."³

From 1917 to 1921 general courses of sub-collegiate grade in agriculture, home economics, manual training, and pedagogy were offered for rural and grade teachers as they had been in previous years. Requirements for students enrolling in this program included graduation from the common schools and a recommendation from the county superintendent of schools.

¹Iowa State College Catalogue, 1917-1918, p. 395.

²Iowa State College Catalogue, 1917-1918, p. 389.

³Iowa State College Catalogue, 1918-1919, p. 364.

Instruction emphasized basic concepts in each of the subject areas and adoption of the work to the rural school situation. All of the regular college facilities, including the laboratories and experiment farms, were made available to students in this program. The rural and grade teachers course was apparently discontinued after 1921, but noncollegiate offerings were continued.

During 1922 and 1923 the summer session was under the direction of R. E. Buchanan. Beginning in 1922 the open admissions policy of previous summers was replaced by one in which requirements were identical to those for admission to the regular college year. In 1934 John E. Foster succeeded to the directorship of the summer session and continued in this position until 1940. In addition to noncollegiate and collegiate courses, graduate work began to be offered in 1922. Furthermore, descriptions of those for whom the summer programs were principally designed took on a new look which continued throughout this period. Noncollegiate programs continued until 1928, after which time they no longer appeared in the Catalogues. Too, the emphasis of these courses had shifted away from preparing rural and grade teachers toward preparing students for practical farming, homemaking, and professional work in trades and industries.

The percentage of students attending Iowa State during the summer dropped after 1920, and between 1920 and 1940 slightly less than 50 percent of the summer students were teachers.¹

From 1922 through 1940 summer school undergraduate courses were designed to serve three specific groups of students. Many were regular college students, who wished either to complete courses they had missed during the regular college year or to take additional work and shorten their college career. Teacher preparation was directed toward two separate groups. Courses for teachers, principals and supervisors were designed for those interested in agricultural education, home economics education, and education in industrial arts, as well as in the related sciences and technical subjects.² Courses in psychology and vocational education were offered for students seeking to complete state certification requirements.

Many teachers, principals, and supervisors took advantage of advanced work during the summer at Iowa State. Courses were offered for public school teachers and supervisors in agricultural education, home economics, manual training and industrial arts. Beginning in 1934 work in these fields was designated particularly for principals and supervisors. These administrators were able to familiarize themselves with recent

¹Iowa State College, "1940 Summer Quarter: Report of Director," Ames, Iowa, 1940, p. 4.

²Iowa State College Catalogue, 1934-1935, p. 306.

developments in these fields as well as pursue special work in vocational education. Science teachers also tended to elect advanced work.

For a brief period during the summers of 1926 and 1927 Iowa State Teachers College, upon the recommendations of the state board of education and the approval of President Pearson of Iowa State, established an extension summer school on Iowa State's campus. This program was specifically designed to meet the needs of rural and grade teachers who sought the twelve weeks normal training certificate. Although this extension program provided a definite service to some 50 to 100 of Iowa's teachers, the program was discontinued after the summer of 1927 apparently due to declining enrollments and the availability of similar programs elsewhere around the state.¹

The summer programs at Iowa State continued to keep pace with changes in certification legislation. By 1927 all teachers of agriculture and manual training in approved Iowa high schools were required to have completed a minimum of nine quarter hours or six semester hours in their field. Effective September 1, 1928, this requirement was doubled. Teachers

¹Minutes of the Iowa State Board of Education, Vol. VII, December 6, 1927, p. 26. In 1927 and 1928 Iowa State Teachers College conducted extension summer programs in the following locations: Spencer, Ida Grove, Harlan, Creston, Albia, Burlington, Estherville, Le Mars, Sac City, Atlantic, Chariton, and Clinton.

attending both summer terms at Iowa State College could fulfill this requirement in either agriculture or manual training.¹

From a foundation of 24 courses which were offered during the first summer session in 1911, the summer program had grown steadily reaching a peak of 745 courses in 1930.² The effects of the depression caused a decrease in enrollment, faculty, and number of courses offered until 1938, when these figures again began to rise.³

During the decades of the 1920s and the 1930s the summer program at Iowa State attracted an increasing number of students from outside the state. Dean Foster suggested the reason for this in 1932.

Many summer school students are public school teachers and those willing to teach who need more work in psychology, education, home economics, agriculture, and manual training to satisfy requirements of the State Department of Public Instruction Iowa State's Summer School is gradually becoming a center of learning in the United States as a result of the increasing number of noticeable visiting professors obtained here during the summer months.⁴

¹Iowa State College Catalogue, 1928-1929, p. 296.

²Iowa State College, "1940 Summer Quarter," p. 12.

³Ibid.

⁴The Iowa State College Student, 4 June 1932, p. 1.

By 1939 the major thrust of the undergraduate program was directed toward regular college students and those desiring to complete requirements in psychology and vocational education. Teachers, supervisors, principals, and superintendents were increasingly pursuing graduate study. It should be remembered that only three to six graduate courses were required for certification for an administrator at that time. Noting that in-service teachers continued to furnish a large percentage of the load during the summer quarter, James E. Wert, professor of vocational education and Director of the Summer Quarter, also noted that many were taking advanced work.

The number of students majoring in education during the summer quarter of 1940 was 392, more than one-half of whom were graduate students.¹

At the close of the summer quarter of 1940, Director Wert speculated on the future of the summer program at Iowa State. He noted that the college facilities and personnel were more than adequate to support an increase in summer enrollment. He suggested that many more undergraduate students for varying reasons could take advantage of the summer program. He further noted that a need existed to attract a much larger proportion of in-service teachers from Iowa and neighboring states. Also, in his remarks, he cautioned against the possibility of losing these teachers and administrators to other institutions.

¹Iowa State College "1940 Summer Quarter," p. 25.

So far, a very small proportion of teachers in Iowa and adjoining states has availed itself of the opportunity of in-service training during the summer quarter. Iowa State College has no desire to delegate this responsibility to other institutions in the case of the in-service education of county agents, teachers and supervisors of agriculture, home economics, industrial education or administrators or specialists in rural education.¹

Thus, in a period of twenty-four years the summer program at Iowa State had grown from one primarily designed for the preparation of vocational teachers to one which served increasing numbers of regular students and school administrators. Courses formerly on only sub-collegiate and undergraduate levels were developed on advanced levels and were attracting an increasing number of students. Throughout these years the program remained committed to the preparation of Iowa's teachers and school administrators.

Teacher certification and Iowa State College

The state certification legislation adopted by the Thirty-first General Assembly continued to provide the basic guidelines for prospective teachers attending Iowa State College until 1934. The requirements for the five-year first grade state certificate in Iowa, (nine quarter hours in psychology and 21 quarter hours in education), exceeded those of many of the neighboring states in which Iowa State College

¹Iowa State College, "1940 Summer Quarter," p. 62.

graduates secured positions. The College continued to encourage those preparing for teaching to meet the requirements of this certificate in preference to those of lower grade, for the holder was entitled to "teach any subject and also hold any position in the high school."¹

On March 19, 1921, the Iowa state legislature enacted a law requiring all Iowa schools, (both public and private), to provide a course of instruction in the Constitution of the United States and in the Constitution of the State of Iowa. This course was to be given no later than the beginning of the eighth grade. The Iowa State Bar Association then asked the Iowa State Board of Education to provide such a course in the schools and colleges to qualify future teachers. On September 23, 1924, the state board of education adopted the policy that

. . . all examinations for teachers' certificates shall cover the fundamental principals of a republican form of government and the Constitution of the United States and of the State of Iowa.²

Examination of the college Catalogues also revealed that in 1923 provisions were made to provide for a lengthier period of teacher preparation work for institutions (including Iowa State) belonging to the North Central Association of colleges and secondary schools. Evidence of this is seen in the

¹Iowa State College Catalogue, 1919-1920, p. 405.

²Minutes of the Iowa State Board of Education, Vol. V, March 13, 1924 - April 13, 1926, pp. 162-163.

requirement of 22 1/2 credit hours of college work in education¹ beginning in 1923 as opposed to the 16 1/2 credit hours which had been required in previous years. Also, beginning in this year, provisional certificates ceased to be mentioned in the Catalogues.

In accordance with legislation passed by the Forty-fifth General Assembly, which became effective July 1, 1935, the board of educational examiners granted a standard secondary certificate² to any graduate of Iowa State College who had completed the minimum requirement of 22 1/2 credit hours in both education and psychology. This represented a decrease of 7 1/2 credit hours from previous years. Nine of these 22 1/2 hours were to be in psychology while hours in education were to be selected in the following areas: methods of teaching (4 1/2); directed observation and supervised student teaching (4 1/2); and the history, introduction to, or the principles of education (4 1/2).³ This change did not, however, affect the history/government requirement.

¹Education as used here includes both education and psychology courses.

²Under the new certification legislation the standard secondary certificate indicated four years of secondary preparation and was limited to the secondary field. This represented an advancement over the first grade state certificate which was legal for any field.

³Iowa State College Catalogue, 1934-1935, p. 292.

The new legislation particularly affected students in the field of industrial science since, prior to 1935, they had not been required to complete student teaching. Other teacher preparation areas--home economics, industrial arts, and vocational education--had required practice teaching, however, prior to passage of the new legislation.

This legislation also changed the composition of the board of educational examiners which dealt with certification matters. Prior to 1935 this board was composed of the presidents of each of the state institutions of higher learning. The new legislation provided that this board be composed of

. . . the state superintendent, as well as one member representing the state institutions of higher learning, one for the private schools of higher learning, one city superintendent and one county superintendent.¹

This new board had the responsibility for issuing teaching certificates and for approving teacher preparation courses in colleges and universities.

Beginning in 1939 the Catalogue further spelled out teacher certification requirements. Credit hours in psychology and education and the government course did not change, but the graduate's diploma was to indicate a

minimum of 22 1/2 credits (15 semester hours) in one subject matter field, with at least 15 credits (10 semester hours) in each of two additional fields; . . .²

¹The Iowa State College Student, 14 December 1933, p. 1.

²Iowa State College Catalogue, 1939-1940, p. 367.

Requiring work in two minor fields represented recognition on the part of Iowa State College of the situation existing in the majority of rural schools. Enrollments in more than one-half of Iowa's high schools of 75 or less and staffs of from three to five teachers, necessitated teaching in two or more fields, in addition to conducting extra-curricular activities.¹

Summary

The years from 1917 to 1941 saw the emergence of America from World War I and her subsequent entrance into World War II. Between these conflicts there was the great prosperity of the 1920s followed by the general economic depression of the 1930s. Roosevelt's New Deal policies, designed to solve the nation's economic ills, led to the unprecedented expansion of governmental authority in American life.

With the passage of the Smith-Hughes Act of 1917, over seven million dollars in federal funds was appropriated for school programs and teacher preparation in vocational education through the nation. Programs of general education, however, remained unsubsidized.

School enrollments on all levels continued to rise², while curricula reflected changing educational philosophies.

¹Twenty-Year Development Program, Part I, pp. 72-73.

²The single exception to this was elementary enrollements which declined for a brief period during the 1930s.

Elementary programs placed new emphasis on meeting the needs of individual students, while secondary curricula stressed educating the students for "life" as embodied in the Seven Cardinal Principles. In higher education, curricula continued to broaden, the junior college spread rapidly, and general education gained favor. Despite the fact that teachers colleges continued to replace normal schools, certification standards were raised, and college summer school programs blossomed, the supply of properly prepared teachers continued to remain inadequate for demands.

In Iowa, acquiring adequate finances, improving instruction, and upgrading teacher preparation were major concerns of this period. While elementary enrollments declined, the number of secondary students continued to rise. New subjects appeared in the elementary curriculum, but the major development was the expansion of vocational programs in the secondary schools. The consolidation movement, which peaked about 1920, led to the rapid disappearance of the one-room schools. No longer on an experimental basis, the normal training high schools prepared the majority of Iowa's rural teachers until the mid-nineteen thirties when enrollments began to decline.

In higher education, enrollment in Iowa junior colleges accelerated rapidly, and the number of students enrolling in the three state institutions of higher education also continued to rise. Continuing concern with the matter of duplication of

work among the three state institutions of higher education prompted another study of this matter in 1926. The resulting Capen report was very favorable to the continuation of existing teacher preparation programs at Iowa State College, particularly in the areas of vocational education.

Under the provisions of the Smith-Hughes Act, strong teacher preparation programs in agriculture, home economics, and trades and industries were developed at Iowa State. In 1919 the Department of Vocational Education was established, and it served as both an instructional and coordinating center for prospective teacher preparation work offered by several divisions of the college. A variety of courses and programs for prospective teachers were offered in psychology, home economics vocational education, home economics education, child development, applied art, agricultural education, vocational education, trades and industries, physical education for men, and physical education for women. In addition, nine other individual departments offered at least one course for prospective teachers.

As early as 1933 an effort was made by President Raymond M. Hughes to more closely coordinate these diverse teacher preparation courses and programs. To this end, a committee appointed by President Hughes recommended that the head of the vocational education department be designated as the Director of Teacher Training. William Lancelot was the first professor to be given this joint responsibility in 1934.

In response to both state and national legislation, Iowa State also expanded its summer programs in vocational fields. Noncollegiate work was gradually phased out, and advanced courses began to appear. By 1941, the major thrust of undergraduate summer work was directed toward regular college students and those desiring to complete certification requirements in psychology and vocational education, while teachers, supervisors, principals, and superintendents increasingly pursued advanced studies.

Iowa State continued to encourage prospective teachers to complete requirements for a five-year first class state certificate until 1935 when state legislation distinguished between elementary and secondary certificates. Other changes in certification led to the development of a teacher preparation course in history/government, student teaching for all prospective teachers, and a specified amount of work to be selected in two minor fields in addition to a student's major area of concentration.

The following time line summarizes major events in teacher education on the national scene, in Iowa, and at Iowa State College from 1917 to 1941.

MAJOR EVENTS - TEACHER EDUCATION

TIME LINE
1917 - 1941

<u>National</u>	<u>Iowa</u>		<u>Iowa State College</u>
American enters World War I Smith-Hughes Act	Iowa accepts Smith-Hughes Act	1917	Four-year course in home economics and agriculture Four-year course in agriculture and manual training Two-year noncollegiate courses: Home Economics, Home Economics and Agriculture
World War I ends Cardinal Principles of Secondary Education	Four Iowa high schools begin vocational homemaking	1918	
	Standard Rural School Law	1919	Iowa State officially approved for teacher preparation under Smith-Hughes Act Major sequence in home economics Major sequence in home economics and physical education Major sequence in home economics and applied art Course in manual training, trades and industries
	Greatest era of consolidation (July 1, 1919-June 30, 1920)	1920	

Time Line 1917 - 1941 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa State College</u>
	State legislature requires all Iowa schools to offer course in Constitution of U.S. and Iowa	1921
		1922
	Examination in Constitution of U.S. and Iowa required for certification	1923
		1924
		Four-year course in industrial arts Nursery School organized First "practice babies" arrive
		1925
	Capen Committee report on duplication	1926
		Major sequence in home economics vocational education
		1927
		Major sequence in applied art
		1928
		Two-year course in industrial arts Agriculture and Science
George-Reed Act Stock market crash	High school graduation required for state certification	1929
		Major in home economics education Major sequence in child care and training Major sequence in textiles and clothing

Time Line 1917 - 1941 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa State College</u>
		1930 Major in child development Four-year program in industrial science Combined major - P.E. Men Combined major - P.E. Women
F.D.R. elected president		1931 1932 Curriculum in occupational therapy College twenty-year program survey
	Certification based on college preparation must include number of years training and specific field of validation	1933 President Hughes comments on need for organization- al unity in teacher education
George-Ellzey Act		1934 President Hughes recommends head of vocational educa- tion department also be Director of Teacher Training
	State legislature restruc- tures state board of educational examiners	1935
George-Deen Act		1936 1937 1938 1939 Curriculum in Science Division of Industrial Science becomes Division of Science
		1940 Industrial arts becomes industrial education--a curriculum within voca- tional education

CHAPTER VI

EDUCATION IN MID-CENTURY AMERICA, 1941-1968

The National Scene

The atomic ending of World War II in 1945 thrust America into a position of world leadership--a leadership, however, which was to be opposed by that of another great power, the Soviet Union. The two decades following the end of the war were marked by alternating periods of uneasy detente and confrontations short of all-out war as America faced the challenge of World Communism primarily in Korea, South Vietnam, the Middle East, and Latin America.

At home, industry and production continued their steady growth. Vast technological advances brought the peoples of the world geographically closer, helped to conquer space, and produced new leisure time for Americans.

The appeal of Communism to much of the world forced the United States to take a critical look at itself. Discrimination in the areas of race relations, social and economic life, and equality of the sexes stared back. Although the nation took steps to remedy these inequalities, much remained undone as the 1970s approached.

Four successive Roosevelt administrations assured Americans that the federal government was "big business." Under his Fair Deal, President Truman essentially extended

policies and programs of the New Deal. President Kennedy's New Frontier and President Johnson's Great Society continued to foster the growth of government and governmental power, and Americans voiced increasing acceptance of the federal government to secure "the American way of life."

The federal government and education

Following World War II the federal government quickened its pace with respect to educational legislation. Support for previously funded programs increased, and the government entered into new areas. Federal spending, which had amounted to about \$100 million in 1940, had already reached more than \$3.5 billion annually by 1950.¹ By 1966-1967 federal educational assistance totaled approximately \$8.5 billion, excluding \$2.3 billion for research and development in all federal agencies and \$0.75 billion for loan programs.²

Beginning in 1944 with the Servicemen's Readjustment Act, a series of GI Bills made it possible for several million veterans to continue their education. College enrollments, which had been depleted by the demands of world conflict, swelled to new heights.

Federal support of vocational education continued to expand. In 1946 Congress passed the George-Barden Act which

¹Butts and Cremin, p. 580.

²Kezevich, p. 196.

authorized federal spending for vocational guidance. The Vocational Education Act of 1963 represented the first major revision of the Smith-Hughes Act. It updated programs in terms of modern technology and provided funds for comprehensive national education programs at the secondary level.

In 1954 the Supreme Court, in *Brown vs. Board of Education*, ruled against segregation in the public schools. Ten years later in the Civil Rights Act of 1964, the Secretary of Health, Education, and Welfare assumed primary responsibility "to deny funds for educational good works, no matter where in this republic, if they were not made available to all without the malpractice of discrimination."¹

Triggered by the launching of Sputnik I in 1957, the National Defense Education Act (NDEA) of 1958 provided federal funds for: strengthening science, mathematics, and foreign language programs; promoting guidance, counseling, and testing services; creating student loans, graduate fellowships, and research contracts; and carrying out other provisions as well. Passage of the NDEA constituted the first time that the federal government had voted funds specifically for nonvocational subjects. Subsequent modifications of this act in the 1960s broadened the range of subjects affected to include the social sciences, English, and reading.

¹Meyer, p. 398.

With passage of the Elementary and Secondary Education Act (ESEA) in 1965, federal support for public education had reached billions of dollars. Although still a specific purpose bill, rather than one designed for support of education in general, ESEA signaled a new approach through its extension of provisions to private and parochial as well as public schools. While there was clear recognition of the need for massive federal aid to education, there was also a growing fear that education could be remade in the federal image.

Elementary education

Elementary enrollments, which had declined during the thirties as a result of lower birth rates, remained fairly stable until 1947-1948 when they again increased as a result of the increased birth rates of World War II. Kindergartens remained popular, and nursery schools began to attract greater numbers of youngsters. Although nursery school enrollments declined somewhat in the late 1940s, interest revived in the 1950s and continued into the 1960 as educators noted benefits arising from early group social experiences.

Curricula broadened until offerings were almost unlimited. While the 3 R's continued to provide a sound foundation, courses such as health, safety, citizenship, arts and crafts, shopwork, and others were considered essential to a proper program. The development of audio-visual materials added new dimensions to learning. Schools began to encourage greater

freedom of discussion and movement, and the thrust of educational philosophy was the development of the whole child, as an individual, through an enriched program of purposeful activity.

Secondary education

High school enrollments increased at an even more rapid rate than did those of elementary schools. For a time, attendance at nonpublic schools rose more rapidly than at public schools. "Enrollments in public schools dropped 16 percent between 1940 and 1950, whereas enrollments in nonpublic schools increased 34 percent."¹ After mid-century, however, the trend reversed to favor the public schools. By 1952 some 85 percent of children aged fourteen to seventeen were in high school,² and this percentage continued to rise. A variety of plans of organization existed, but the 6-3-3 plan, which included the separate junior high school experience, remained most popular; the second choice was the 8-4 plan.

Secondary school curricula, like elementary, continued to expand. The life adjustment movement of the late 1940s was developed to provide for the approximately 60 percent of high school students, who were considered neglected because they were neither college-bound nor suited for available vocational

¹Butts and Cremin, p. 570.

²Ibid., p. 569.

offerings. This movement, which was an outgrowth of a series of regional conferences sponsored by the United States Office of Education in 1946, became the object of critics of American schools in the 1950s. Dissatisfied educators adopted a variety of positions. Many criticized the high school for attempting to educate too many youths and, consequently, for lowering standards. Others agreed that the primary purpose of the high school should be college preparation, and they sought a return to hard core academics. At the other extreme were those who felt that the high school was catering too much to its college-bound students. The comprehensive high school, as advocated by James B. Conant, however, remained the typical secondary institution of these years. Although during the 1950s and 1960s much experimentation took place, the emphasis on correlated or broad field courses continued. A whole array of new practical and vocational courses appeared, and extracurricular activities became a major enterprise. However, Good and Teller point out that no final agreement on curriculum was reached during this period. "Neither among educators nor in the public mind [was] there agreement on curricula or standards in secondary education."¹

¹Good and Teller, p. 474.

Higher education

Junior colleges continued to spread rapidly, particularly in the West. Between 1930 and 1973 the number of junior colleges more than doubled, and enrollment reached almost two million.¹

Post-war college and university enrollments rose higher and higher as a college education came to be considered essential to success in life. Foreign students, in increasing proportions, began to come to the United States, attend its colleges and universities, and then return home with new learnings and new impressions.

Courses continued to multiply and were increasingly offered in places remote from main campuses. Student activities and athletics grew to enormous proportions. The general education movement continued and was fueled anew by the growing internationalism of the times. Particularly in the 1960s, less emphasis was being placed on required courses and distribution requirements as curricula were increasingly being adjusted to meet the demands of better prepared students and new fields of learning.

Education of teachers

The decades of the 1940s, 1950s and 1960s witnessed the still further upgrading of programs for prospective teachers.

¹Ibid., p. 451.

The trend toward replacement of state normal schools by teachers colleges, which had commenced about 1900, was all but completed by mid-century. Only a few state normal schools remained, while teachers colleges numbered over 200.¹ Some teachers colleges were even becoming state colleges, offering diversified programs of which teacher preparation was only one.

The reduced birth rates of the 1930s had resulted in a teacher shortage of increased proportions during the late 1950s and early 1960s. Although this shortage was eased somewhat by increasing college enrollments, severe shortages remained in particular areas such as elementary education, mathematics, and science.²

Increased professionalization was evident in changing certification requirements. By the late 1960s most states had enacted legislation which required the completion of a four-year college program for prospective teachers. There was also evidence of a growing practice of educating elementary teachers, as well as secondary teachers, in colleges and universities. A few states began to require a master's degree for teaching on the secondary level. Despite these improvements, a large number of elementary teachers still did not have a college education. Furthermore, because of the demand for

¹Butts and Cremin, p. 603.

²Pounds and Brynner, p. 418.

teachers, temporary or emergency certificates were still being issued to those who had not completed college.

With regard to curriculum, general agreement had developed as to the necessity for both academic and professional courses. There was growing recognition that professional preparation should include the following areas: foundations of education, competence in a specific field, and a period of supervised practice teaching. Controversy remained, however, with respect to the question of the most desirable relationship between academic and professional work.

Summer programs became the rule, with only a few exceptions, at all large colleges and universities and at many smaller ones. Extension and correspondence programs also continued to expand. Courses offered through these experiences provided an ever-growing number of in-service teachers with opportunities for increased professionalization.

Education in Iowa

Educational developments in Iowa between 1941 and 1968 were shaped, to a large degree, by new legislation at both state and federal levels. Enrollments increased at all levels after the war. Improvement of instruction occurred in both academic and nonacademic subjects, and new subjects were introduced into the curriculum, particularly on the secondary level. Legislation relating to the reorganization of school

districts led to the rapid elimination of one-room schools and to the development of more equitable educational opportunities for all students. The state department of public education, reorganized in 1953, continued to expand its services and to upgrade teacher certification requirements.

Elementary education

Although the number of students attending Iowa's public elementary schools decreased during the war years, the later 1940s, the 1950s, and the 1960s were years of constantly climbing enrollments. In 1947-1948 public school elementary enrollment (K-8 and ungraded classes) totaled 351,230 students; by 1967-1968 the comparable figure was 456,476.¹ Kindergarten enrollments grew consistently, even during the war years, and almost tripled from 19,978 in 1941-1942 to 58,554 in 1967-1968. Enrollments in Iowa's private elementary schools also increased, particularly between 1951 and 1966, but then began to decline.

Facilities and learning conditions continued to improve in Iowa's rural schools, and the number of one-room schools decreased rapidly. Between 1948 and 1958 this number had declined more than 50 percent, from 5,561 to 2,067. Thereafter, the decrease was drastic as the pace of district

¹Enrollment figures for the years prior to 1955 were taken from the department of public instruction reports for the years indicated; figures for the years following 1955 were taken from the department of public instruction's publication Data on Iowa Schools.

reorganization accelerated. In 1963-1964, the last year for which figures are available, only 195 one-room elementary schools remained in Iowa.

Improvement of instruction programs under the direction of the department of public instruction were directed toward both specific areas and the elementary curriculum in its entirety. Specific programs encompassed physical education for both elementary and rural schools, conservation of natural resources, and music in kindergarten through second grade. Major changes in these decades, however, occurred through the addition of more specialized services. Although the greater share of these newer services and activities were directed to students beyond the sixth grade, many did reach into the lower levels and set a precedent for further development in later years.

In its policy statement of November 14, 1963, "Future Goals for Public Schools in Iowa," the Iowa State Board of Education emphasized that the minimum educational programs were to include not only academic and vocational work but, also, related services and activities in the fields of audio-visual aids, guidance, health, library experiences, and special education. The board recommended that the time allotted to areas of the elementary curriculum be organized as follows: two-thirds ($2/3$) to language arts, mathematics, social studies, science, and health; one-sixth ($1/6$) to art, music, directed recreation, and physical education; and one-sixth ($1/6$) to

problems in daily living and individual help.¹

Secondary education

Like elementary enrollments, secondary enrollments declined during the war years, then began to rise slowly, and accelerated in the later 1950s due to the post-war baby boom. From a low of 112,788 students (9th-12th grades) in 1949-1950, enrollment rose steadily and by 1967-1968 had reached approximately 206,269 students.² By 1968, although the most common form of organization was the 8-4 plan, 54.5 percent of Iowa's students were enrolled in schools organized on the 6-3-3 plan.³

The state department of public instruction initiated improvement of instruction programs in several areas of the curriculum between 1941 and 1968, most notably physical education for both junior and senior high school boys and girls. The major thrust for both the improvement of existing programs and the development of new ones at the secondary level, however, was provided by legislation which approved additional federal and state appropriations.

As State Superintendent Agnes Samuelson had predicted in 1938, vocational education programs at the secondary level

¹Iowa Department of Public Instruction Report, 1962-1964, p. 14.

²This figure does not include 9,583 special education and 711 pupils in non-high school districts in grades K-12.

³Data on Iowa Schools (Des Moines: State Department of Public Instruction, 1969), p. 39.

continued to expand between 1941 and 1968. Although the regular vocational education program in Iowa's public schools suffered losses during the war years, these were largely offset by the war training activities of these departments which had begun in the fall of 1940. Operated by the state board of vocational education and financed by federal monies, these programs provided vocational training for war production workers in industry and on the farms.

Following the war, vocational day school enrollments again began to rise, and they reached new all-time highs. Increased interest and participation in vocational agriculture resulted partly from greater emphasis on off-farm agricultural occupations; by 1968, 10,987 students were enrolled in day school programs. Enrollments in vocational home economics and trade and industrial classes also increased. The enrollment figures for these two programs in 1968 were 20,505 and 2,181 students, respectively. Later in the period, the Vocational Education Act of 1963 provided both for the extension of previous programs and for the development of new ones such as health education and home economics occupations, distributive education, and office occupations.

Certain academic areas of the curriculum received special emphasis, and interest developed in newer subject areas such as audio-visual services, special education, guidance, and safety education and driver training. Under the National

Defense Education Act of 1958, which provided federal aid for academic or nonvocational subjects, the state department of public instruction established committees for the development of curriculum guides in mathematics, modern languages, and science.

Increasing interest in audio-visual activities became apparent in the early 1940s. By 1962 the department of public instruction had added a staff consultant in audio-visual services and educational television due to the rapidly developing utilization of new instructional materials. Title II of ESEA encouraged still further development of educational media.

In 1950 a division of special education was created within the department of public instruction to assist local school districts. Services were increasingly extended to pupils handicapped with respect to vision, hearing, speech, physical well-being, mental retardation, and personality disorders. Title I of the Elementary and Secondary Education Act of 1965 provided additional funds for the development of special education programs. State aid for such services rose from \$30,000 in 1946 to an annual appropriation of 3 1/2 million dollars during the 1968 fiscal year.¹

The 1948-1950 biennium witnessed a tremendous increase in guidance services and a promising outlook for future expansion.

¹Data on Iowa Schools, 1967-1968, p. 165.

By 1952, 16 colleges in Iowa offered at least one basic guidance course. The in-service training guidance courses offered by Iowa State College, however, reached the greatest number of teachers and schools. Table 17 illustrates the strong leadership of Iowa State College in this field in comparison with Iowa State Teachers College and Drake University. Despite these programs, only 11.5 percent of Iowa's

Table 17. Collegiate in-service training programs in guidance, 1950-1952^a

Colleges	No. of courses	No. of teachers	No. of schools represented
Iowa State College	33	1,118	79
Iowa State Teachers College	7	318	17
Drake University	4	137	6

^aIowa Department of Public Instruction Report, 1950-1952, p. 50.

public school districts had approved guidance programs in 1959. Aided by funds from Title V-A of NDEA, however, guidance services and personnel continued to increase, and by 1967-1968 the percentage of school districts having approved programs had increased to 78.5 percent.¹

¹Iowa Department of Public Instruction Report, 1966-1968, p. 71.

Safety education and driver training had become a recognized part of the high school curriculum by 1950. State Superintendent Jessie M. Parker reported on Iowa's leading position in driver training at that time.

Iowa now leads the nation in its driver training program and the state is continuing to improve the teachers' qualifications in this important subject area.¹

By 1966 Iowa legislation required every public school district to either offer or make available an approved course in driver education for all residents between the ages of fifteen and twenty-one years.²

School district reorganization The decades of the 1920s and 1930s had underscored anew the need for both organizational and financial changes among the state's many school districts. In 1945 the Iowa legislature responded with the passage of several acts. The Supplemental Aid Act provided a precedent for state support designed to provide for greater equalization of educational opportunities. The Agricultural Land Tax Credit Act helped to insure farmers against excessive taxation for schools. The General Assembly also passed a measure which provided for study and survey by county boards of school district reorganization. Such a plan had been

¹Iowa Department of Public Instruction Report, 1948-1950, p. 16.

²Data on Iowa Schools, 1966-1967, p. 83.

originally recommended by State Superintendent John Riggs in 1908.

Between 1945 and 1947 there were a series of new consolidations. Fearing the multiplication of small, weak districts, the legislature declared a moratorium on all school district changes, except those approved by county boards, until June 30, 1953.¹ In 1953 the Fifty-fifth General Assembly repealed the consolidation law and established the "community" school district as the new unit of public education in Iowa.² Under this plan the total number of school districts continued to decline. As of July 1, 1954, there were 4,417 school districts in Iowa, 819 of which had high schools. In 1958 the number of districts maintaining four-year high schools had been reduced to 745. The Iowa legislature subsequently required all non-12 grade districts to be attached to high schools by July 1, 1966. By July 1, 1968, all but five districts had complied. This meant that Iowa had a total of 460 school districts, and 455 of these maintained high schools.

Higher education

The number of junior colleges declined during World War II and then leveled off at a total of 16. No new public junior

¹George S. May, *The End of the First Phase, The Palimpsest* 37 (January 1956): 61.

²Leland L. Sage, *A History of Iowa* (Ames: The Iowa State University Press, 1974), p. 331.

colleges were established after 1947. Although enrollment reached a low point during the war years, growth accelerated following the war and was even more rapid beginning about 1955. During the ten-year period between 1955 and 1965, enrollment more than doubled from 2,332 students to 5,999.

In 1967 the Sixty-second General Assembly amended the junior college law to the effect that an institution, if operated by a merged area, be designated as either an area community college or an area vocational school. Merged area schools were eligible for state aid for Iowa students. Although the programs of both types of institutions were quite similar, community colleges also offered the first two years of college work, including pre-professional education.¹ By June 30, 1968, there were 11 area community colleges and four area vocational schools; only one community college continued to operate under the local school district. Full-time enrollment figures for these two-year institutions had reached 13,672 by the fall of 1968.

Strayer report on duplication The year, 1950, saw still another report issued on the relationships among the state institutions of higher education in Iowa. In his report, Survey Director George D. Strayer made several specific references to the teacher preparation programs at the three

¹Iowa Department of Public Instruction Report, 1966-1968, p. 43.

state institutions of higher learning, and he recommended that such a complex service required continuous study and adjustment.

Citing the high birth rate of the 1940s in Iowa, the report noted that Iowa State Teachers College, alone, would probably be unable to handle the anticipated demand for prospective elementary teachers. No specific recommendations were made, however, regarding the initiation of elementary programs at the other two state institutions.

The report questioned whether the Iowa State College program to prepare teachers in the sciences under the inappropriate name of "vocational education"¹ should be continued or dropped. While an oversupply of teachers in the sciences existed in 1950, the possibility also existed that expected increases in high school enrollments would necessitate teacher preparation programs in the sciences in all three state institutions.

Strayer accurately recognized the inappropriateness of the term "vocational education" for at least one teacher preparation program. It must be remembered, however, that the title was probably partially selected as a cover-up, according to Barton Morgan, in order for Iowa State to offer teacher preparation programs similar to those offered by Iowa State

¹Report of a Survey of the Institutions of Higher Learning in the State of Iowa, by George D. Strayer, Director (Des Moines, Iowa: State Board of Education, 1950), p. 35.

Teachers College and the State University of Iowa at a time when duplication of work among these three institutions was a matter of definite concern. Under the guise of vocational education, for which Iowa State had the state's sanction, expansion of nonvocational as well as vocational teacher education programs had flourished at the college. There had apparently been no thought of organizing or coordinating teacher preparation programs under any other department or nomenclature.

Further recommendations were made with respect to the preparation of school superintendents, in-service programs, and the need for continuous study of teacher education programs. The report suggested that programs designed to prepare school superintendents at the State University of Iowa were adequate and, therefore, should be limited to this one institution. The necessity and value of maintaining programs designed for the professional improvement of in-service teachers at all three state institutions was strongly acknowledged. Finally, the Strayer report recommended the establishment of a continuing interinstitutional Committee on Teacher Education to report to the state board's Committee on Educational Goals.¹

In summary, the 1950 report commended the diversity of organization evident among the three state institutions. The

¹Report of a Survey of the Institutions of Higher Learning, p. 36.

survey staff concluded that because of this diversity, the geographical distance between institutions, their large size, and the concept of differentiation along major and service lines, duplication of work at the undergraduate level was not a serious matter.

Teacher preparation and certification

The matter of an inadequate number of teachers for the schools of Iowa was mentioned infrequently in department of public instruction Biennia Reports during the years between 1941 and 1968. The shortage of regularly qualified teachers caused by World War II was offset to a large extent through the issuance of special war emergency certificates. A total of 3,543 of these certificates was issued between 1942 and 1944, primarily to former teachers who were called back into service as well as to new teachers who had not met required standards.¹ Although the teacher shortage continued following the war, the number of emergency certificates which was issued declined sharply. In 1948-1949, 967 were issued; by 1952 the number was only 471.

The major focus of this period was on the continuous progress toward upgrading the requirements for teacher certification. The movement, in fact, led to the end of normal

¹Iowa Department of Public Instruction Report, 1942-1944, p. 38.

training high schools as agencies of teacher preparation. The number of such schools had declined rapidly from 1,953 in 1938 to 22 by 1947, after which time no further figures or information were found in the sources examined for this investigation.

At the same time, junior colleges in Iowa began expanding teacher preparation offerings both during the regular academic year and during the summer. The latter offered in-service teachers an opportunity to take credits which could apply to renewal certification.

Colleges and universities also continued to enlarge their programs for prospective teachers and to develop new programs as the demand for them arose. A clear example of Iowa's success in raising standards for teaching is evident from the fact that by 1962, "for the first time in Iowa history more than half of Iowa's elementary teachers were four-year college graduates."¹

The state board of educational examiners and, later, the teacher education and certification section of the state department of public instruction, continued to maintain contact with teacher preparation institutions through visitation and the issuance of reports. In 1968 department members were consulting with teacher education personnel in higher educational institutions to develop guidelines for teacher

¹Iowa Department of Public Instruction Report, 1960-1962, p. 23.

preparation in each major area of instruction.

A major change in the organizational structure and responsibility for teacher certification occurred in 1953. In that year, the Fifty-fifth General Assembly abolished the Iowa State Board of Educational Examiners. The new legislation created a department of public instruction under the direction of a state board composed of nine members--one from each of the eight Congressional districts, elected by delegates at a district convention, and one appointed by the governor. On and after January 1, 1955, this nine member board was to appoint the state superintendent, with two-thirds approval of the state Senate, every four years.

Under this new organization, responsibility for teacher certification was transferred to the state department of public instruction under its division, Teacher Education and Certification.¹ This division established a new classification for certificates during the 1952-1954 biennium. Following is a list of the five classes of these certificates with the period for which each was valid listed in parentheses:

Permanent Professional Certificate (lifetime); Professional Certificate (10 yrs.); Pre-Professional Certificate (6 yrs.); Substitute Certificate (6 yrs.); and Temporary Certificate

¹This section was later known as Professional Education and Teacher Certification and, then, Teacher Certification and Approval.

(1 yr.).¹ Each of these certificates was endorsed for the specific type of teaching or administrative experience for which the holder was qualified. This new endorsement procedure corrected a long-standing weakness in Iowa certificates which had previously permitted a holder to teach in any or all subject fields. The new classifications were accepted by the state department of public instruction in June, 1954. At the same time, the department specified that institutions preparing teachers for certification in Iowa must develop their programs to include: general education courses, preparation in a major teaching field, education psychology including supervised practice teaching, and student selection and guidance.²

Iowa State College: From Vocational
Education to Education, 1941-1968

Between 1941 and 1968 the demand for teacher education at Iowa State led to the continuation of previous programs as well as the development of new major and minor curricula. Although vocational education fields continued to serve the majority of prospective teachers, many students began to take advantage of new work in nonvocational areas. The increasing

¹By 1958 an additional classification was added--a Professional Commitment Certificate, which was valid for one year. A fuller description of each of these certificates is found in Appendix D.

²Critchlow, pp. 8-9.

diversification of teacher preparation studies underscored the inappropriateness of the term vocational education and was a major factor leading to the establishment of the Department of Education in 1962.

Growing interest in coordinating teacher education throughout the college was evidenced in the formation of teacher education committees and in the creation of the position of director of teacher education. These early attempts, however, fell short of providing the desired solution. Increasing enrollments, the proliferation of programs and courses, the need for a centralized administrative authority to direct all teacher education work, and a desire for NCATE accreditation constituted factors which eventually led to the establishment of a College of Education on September 1, 1968.

Psychology

The Department of Psychology remained under the direction of John E. Evans until 1948 when he resigned as department head but remained on the teaching staff. By 1941 courses offered by this department were designed not only to present "essential psychological principles underlying effective teaching" but also "to give a scientific appreciation of child behavior."¹ Only two new courses were added to the department between 1941 and 1948--Special Topics in 1941 and Psychology

¹Iowa State College Catalogue, 1941-1942, p. 352.

of the Adolescent in 1944. All undergraduate teacher preparation courses in psychology which were offered between 1941 and 1969 are listed in Table 18. Those courses which were required for certification or offered as electives to fulfill certification requirements are designated by X.

Iowa certification legislation continued to require the completion of nine quarter credits in psychology through 1968. Beginning in 1941 and continuing until 1957, students were allowed some flexibility in course choice. From 1941 to 1949 General Psychology and Educational Psychology (Learning) were required for prospective teachers. The additional three hours were to be selected from among the following: Educational Psychology (Motivation), Tests and Educational Measurements, or Tests and Measurement Interpretation.

Under the leadership of William Abbott Owens between 1948 and 1959, several course changes took place within the Department of Psychology. In 1949 Tests and Measurement Interpretation was dropped and four new courses were added--Quantitative Concepts in Psychology, Individual Testing, Personal Counseling, and Developmental Psychology. The latter course represented a combination of General Psychology and Child Psychology and was offered until 1957. The number of courses offered varied only slightly, between 13 and 15, until 1957-1959 when the number dropped to 11. In many instances new courses essentially replaced those which were dropped. Courses new to

Table 18a. Undergraduate teacher preparation courses in psychology, 1941-1969^a

No.	Course Name	Years												
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52		
101	General Psychology I*	X	X	X	X	X	X	X	X	X	X	X	X	X
333	Educational Psychology**	X	X	X	X	X	X	X	X	X	X	X	X	X
335	Psychology of Motivation***	X	X	X	X	X	X	X	X	X	X	X	X	X
315	Child Psychology#	X	X	X	X	X	X	X	X	X	X	X	X	X
440	Psychological Measurement I##	X	X	X	X	X	X	X	X	X	X	X	X	X
516	Advanced Child Psychology	X	X	X	X	X	X	X	X	X	X	X	X	X
533	Psychological Statistics###	X	X	X	X	X	X	X	X	X	X	X	X	X
536	Psychology of Reading	X	X	X	X	X	X	X	X	X	X	X	X	X
538	Psychological Fundamentals of Guidance and Counseling†	X	X	X	X	X	X	X	X	X	X	X	X	X
530	Psychology of Skill	X	X	X	X	X	X	X	X	X	X	X	X	X
499	Special Problems††	X	X	X	X	X	X	X	X	X	X	X	X	X
414	Psychology of the Adolescent				X	X	X	X	X	X	X	X	X	X
433	Quantitative Concepts in Psychology									X	X	X	X	X
541	Individual Testing†††									X	X	X	X	X
539	Personal Counseling									X	X	X	X	X
215	Developmental Psychology									X	X	X	X	X
540	Psychological Measurement II‡													X
555	Theories of Learning††													X
436	Psychology of Exceptional Children###													X
522	Psychology of Counseling§													X
530	Advanced Developmental Psychology§§													X
230	Developmental Psychology§§§													X
201	General Psychology II"													X
533	Advanced Educational Psychology""													X
430	Psychology of Adolescence"""													X
531	Psychology of Exceptional Intelligence													X
535	Psychology of Reading													X
201	Learning and Motivation													X

^aSee page 311 for key.

Table 18a (Continued)

No.	Course Name	Years													
		1952-53	1953-54	1954-55	1955-56	1956-57	1957-59	1959-61	1961-63	1963-65	1965-67	1967-69			
101	General Psychology I*	X	X	X	X	X	X	X	X	X	X	X	X	X	X
333	Educational Psychology**	X	X	X	X	X	X	X	X	X	X	X	X	X	X
335	Psychology of Motivation***	X	X	X	X	X	X	X	X	X	X	X	X	X	X
315	Child Psychology#	X	X	X	X	X									
440	Psychological Measurement I##	X	X	X	X	X	X	X	X	X	X	X	X	X	X
516	Advanced Child Psychology	X	X	X											
533	Psychological Statistics###														
536	Psychology of Reading														
538	Psychological Fundamentals of Guidance and Counseling†	X	X	X	X										
530	Psychology of Skill														
499	Special Problems††	X	X	X	X	X	X	X	X	X	X	X	X	X	X
414	Psychology of the Adolescent	X	X	X	X	X									
433	Quantitative Concepts in Psychology	X	X	X	X	X									
541	Individual Testing†††	X	X	X	X	X	X	X	X	X	X	X	X	X	X
539	Personal Counseling	X	X	X	X										
215	Developmental Psychology	X	X	X	X	X									
540	Psychological Measurement II‡	X	X	X	X	X	X	X	X	X	X	X	X	X	X
555	Theories of Learning‡‡	X	X	X	X	X	X	X	X	X	X	X	X	X	X
436	Psychology of Exceptional Children‡‡‡			X	X	X	X	X	X	X	X	X	X	X	X
522	Psychology of Counseling§					X	X	X	X	X	X	X	X	X	X
530	Advanced Developmental Psychology§§						X	X	X	X	X	X	X	X	X
230	Developmental Psychology§§§						X	X	X	X	X	X	X	X	X
201	General Psychology II"						X	X	X	X	X	X	X	X	X
533	Advanced Educational Psychology""							X	X	X	X	X	X	X	X
430	Psychology of Adolescence"""								X	X	X	X	X	X	X
531	Psychology of Exceptional Intelligence											X	X	X	X
535	Psychology of Reading											X	X	X	X
201	Learning and Motivation														X

Table 18b. Key for Table 18a

*No. 204, General Psychology from 1941-1957; No. 104, General Psychology from 1957-1959; No. 104, Introduction to Psychology from 1959-1961; No. 104, General Psychology I from 1961-1965.

**No. 334, Educational Psychology Learning from 1941-1949; No. 334, Educational Psychology from 1949-1965.

***No. 335, Educational Psychology Motivation from 1941-1949.
#Known as Psychology of Childhood and Adolescence from 1941-1949.

##No. 434, Tests and Educational Measurements from 1941-1963; No. 434, Psychological Measurement I from 1963-1965.
###Known as Tests and Measurement Interpretation from 1941-1949.

†Known as Psychology of Vocational Selection and Guidance from 1941-1949.

††No. 520, Special Topics from 1941-1965; No. 499, Special Topics from 1965-1967.

†††No. 525, Individual Testing from 1949-1965.

‡No. 534, Advanced Tests and Measurements from 1951-1963; No. 534, Psychological Measurement II from 1963-1965.
‡‡Known as Psychology of Learning from 1951-1959.

‡‡‡No. 526 from 1954-1957; No. 415 from 1957-1965.

§No. 538, Counseling Tools and Techniques from 1956-1963; No. 538, Counseling Psychology I from 1963-1965; No. 521, Counseling Psychology I from 1965-1967.

§§No. 516, Advanced Developmental Psychology from 1957-1965.

§§§No. 234, Developmental Psychology from 1957-1965.

"No. 205, General Psychology from 1959-1963; No. 205, General Psychology II from 1963-1965.

""No. 556, Advanced Educational Psychology from 1959-1965; No. 533, Advanced Educational Psychology from 1965-1967.

""No. 424, from 1963-1965.

the program dealt principally with tests and measurements, guidance, learning theories, and the gifted student. The addition of work in both guidance and testing was directly related to the development of these aspects of curriculum in Iowa publ. schools during the 1950s.

Beginning in 1949 two of the courses listed as optional for certification changed. Educational Psychology (Motivation) and Tests and Measurement Interpretation were replaced by Psychology of the Adolescent and Quantitative Concepts in Psychology.

No further program changes occurred until 1955 when Developmental Psychology 215 was offered as an alternative to General Psychology. During Owens' final two years as head of the department, all certification courses were required; students were apparently not permitted any choices. This policy was continued by both Don C. Charles, acting head of the department from 1959-1961, and by Wilbur L. Layton who became professor and head of the department in January, 1960. Layton came to Iowa State University from the University of Minnesota where he had been Assistant Professor of Psychology and Assistant Director of the Student Counseling Bureau. No changes in the courses required for certification occurred between 1957 and 1969. Requirements included General Psychology, Educational Psychology, and Developmental Psychology.

Beginning in 1959, under the direction of acting head Don Charles, the psychology department began a new period of expansion. Two new courses, General Psychology II, which provided an "introduction to fundamental concepts and classical experiments in conditioning, learning, motivation, emotion, sensation, and perception,"¹ and Advanced Educational Psychology were added. Expansion continued under Wilbur D. Layton. Between 1963 and 1969 three courses were added bringing total departmental offerings once again to a high of 15 courses. The new courses dealt with the psychology of reading, the gifted child, and learning motivation.

Safety education The teacher preparation program in safety education developed gradually within the Department of Psychology. Several courses, which were incorporated into the major program in 1957, had much earlier origins. For example, Psychology of Safety 474, which was originally taught in 1932 and had nothing to do with the preparation of teachers, became an elective for the major program. In 1941 a seminar in the psychology of safety was added to department courses, and in 1946 Problems of Human Conservation appeared. Further expansion occurred in 1949 with the addition of supervised teaching in driver education and a special topics course. In 1950 still another new course was added, Methods and Materials for Teaching Safety and Accident Prevention.

¹Iowa State University Catalogue, 1959-1961, p. 240.

Despite program expansion in the areas of both safety and driver education, no specific mention of teacher preparation in either of these areas was made until 1951. At this time the Catalogue noted that students majoring in the department could prepare themselves for positions as driver training instructors. Undergraduate courses in safety and driver education which were offered by the psychology department between 1951 and 1969 are listed in Table 19. The program designed to prepare driver training instructors continued without change until 1957.

Beginning in 1957 the psychology department offered two new courses--Special Problems in the Psychology of Safety and Theory and Principles of Driver Education.¹ With the addition of these courses, the department arranged a specific course sequence for teaching driver education and safety which met certification requirements as set forth by the department of public instruction. The required course sequence included Problems in Human Conservation and the two courses in driver education. In addition, students were to select two courses from the following four: Special Problems in the Psychology of Safety, Psychology of Safety, Methods and

¹Practices of Driver Training basically replaced Practices of and Supervised Teaching in Driver Training Education but provided broader coverage.

Table 19. Undergraduate teacher preparation courses in driver education and safety, 1951-1969

No.	Course Name	Year																
		1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-59	1959-61	1961-63	1963-65	1965-67	1967-69					
474	Employee Development*	X	X	X	X	X	X	X	X	X	X	X						
571	Seminar, Psychology of Safety**	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
270	Problems of Human Conservation***	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
371	Practices of Driver Education#	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
599B	Special Topics##	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
570	Administration and Supervision of Human Cooperation and Accident Prevention Programs###	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
370	Theory and Principles of Driver Education									X	X	X	X	X	X	X	X	X
499B	Special Problems†									X	X	X	X	X	X	X	X	X

*Known as Psychology of Safety from 1941-1957; Human Utilization from 1957-1963.

**No. 574 from 1941-1965.

***No. 274 from 1946-1957 and from 1963-1965; No. 174 from 1957-1963.

#Known as Practice of, and Supervised Teaching in, Driver Training Education from 1949-1957; No. 372, Practices of Driver Education from 1957-1965.

##No. 520B from 1949-1965.

###Known as Methods and Materials for Teaching Safety and Accident Prevention from 1950-1957.

†No. 320 from 1957-1965.

Materials for Teaching Safety and Accident Prevention, and the Seminar, Psychology of Safety. This sequence was varied slightly in 1961 with the addition of Vocational Education 550, Audio-Visual Methods in Education, as an alternate lecture. At the same time the course in Special Topics (Safety) replaced Psychology 474, Human Utilization, as an elective. Also, the credit hour requirement in electives was reduced from six to five hours. The only further changes occurred in 1965 when Psychology 474 was dropped, and Mrs. Lillian C. Schwenk, assistant professor of psychology, was appointed advisor to students in the field of safety education.

Home economics

The Division of Home Economics¹ was led by three different women during the years between 1941 and 1968. Genevieve Fisher continued as dean until her retirement on July 31, 1944. She was succeeded by P. Mabel Nelson, who came to Iowa State in 1923 and who had served as head of the Department of Foods and Nutrition from 1926 to 1944. Although she relinquished her administrative duties in 1952, she remained on the staff to teach. Miss Nelson was succeeded in 1952 by Helen R. (LeBaron) Hilton, who served as dean of Home Economics for the next twenty-three years. Under the leadership of these women

¹As of July 4, 1959, the Division of Home Economics became known as the College of Home Economics.

and the department heads responsible to them, teacher preparation programs in applied art, home economics, and child development continued to expand to meet the needs of Iowa State students.

Applied art The Division of Home Economics continued to offer a major curriculum in applied art throughout this period. Course work was designed to provide "instruction in the use of materials, art elements and design principles, applicable to the needs of the individual, the home, and the community."¹ However, applied art majors could qualify themselves as teachers by completing both the major work and the educational credits required to obtain a secondary teaching certificate.

The program in applied art with respect to the preparation of teachers did not change until 1956 when, for the first time, a course specifically designed for prospective teachers was added to the curriculum. At this time the department was under the direction of Marjorie S. Garfield, who had become head of the department in 1948 and would remain in this position until her retirement in 1969. Born in Boston, Massachusetts, Miss Garfield had earned both her bachelor and master of fine arts degrees from Syracuse University. She subsequently served as professor and head of the Department of

¹Iowa State College Catalogue, 1941-1942, p. 242.

Interior Design and Decoration at her alma mater for twenty years before coming to Iowa State.¹

In 1956 the applied art curriculum showed the addition of the prospective teachers' course, Methods and Media in Art, as a part of the course in special problems. In 1957 Supervised Teaching in Art was introduced by the department. Also, in this year, the Catalogue first specified the courses required to obtain certification for teaching applied art in Iowa's secondary schools. In addition to the required hours in psychology and vocational education, professional preparation for certification required completion of the two courses in special problems and supervised teaching.

The gradual expansion of teacher preparation work in this department culminated in 1963 with the introduction of a major sequence in art education, which was designed to prepare teachers for grades seven through fourteen. At this time Methods and Media in Art was dropped and Art Methods for the Secondary Schools was substituted in its place. By 1967 Art for the Elementary School was added to the art education major; however, this course did not become a part of the professional education sequence as had both Art Methods for the Secondary Schools and Supervised Teaching.

¹Eppright and Ferguson, p. 278.

Thus, the development of professional teacher preparation courses and the introduction of a major in art education within the Department of Applied Art had occurred solely under the leadership of Marjorie Garfield and her staff. Over these twenty-one years, enrollment in the department had increased from 67 art majors to over 500 undergraduates.¹ Eppright and Ferguson had this to say about Marjorie Garfield's outstanding leadership.

She had the vision, ability, and devotion needed to lead the program into new directions, to provide for its burgeoning growth, and to broaden the cultural opportunities for the entire university and the community of Ames.²

Home economics education Five different women headed the Department of Home Economics Education between 1941 and 1968: Florence Alberta Fallgatter (1938-1958); Mattie Patterson (1958-1959); Mary Lyle (1959-1960); Marguerite Scruggs (1960-1966); and Alberta D. Hill (1966-1968). In reflecting briefly upon the contributions of some of these department heads, Ray J. Bryan noted that Florence Fallgatter's outstanding administrative ability, Mattie Patterson's specialization in curriculum, and Mary Lyle's work in adult

¹Iowa State Daily, 18 April 1969, Applied Art, Class No. AC-2, Box No. 1, Folder: 1-3, Marjorie Garfield, Iowa State University Special Collections, Ames, Iowa.

²Eppright and Ferguson, p. 277.

education helped give the home economics education department national recognition.¹ Perhaps the most influential of all these, however, was Florence Fallgatter, who served as department head for twenty years until her retirement in 1958.

A native Iowan, Miss Fallgatter received her B.S. from the University of Minnesota in 1917. For the next several years, she taught in Minnesota high schools and served in home economics supervisory positions in Minnesota and Montana. The recipient of an M.A. degree from Columbia Teachers College in 1926, Miss Fallgatter became a regional agent for the Home Economics Education Service in the United States Office of Education. In 1933 she was appointed chief of this service and served for three years before coming to Iowa State to head the Department of Home Economics Education.² Miss Fallgatter brought a rich and varied background in home economics education to Iowa State, which was further broadened through service as president of several national vocational and home economics associations. Eppright and Ferguson spoke of her valuable service to the college.

¹Interview with Ray J. Bryan, Director of Professional Studies, Iowa State University, Ames, Iowa, 25 March 1975.

²Who's Who in American Women, Vol. VI, p. 399, Home Economics Education, Class No. AC-5, Box No. 1, Folder: Mary Lyle 1-3, Iowa State University Special Collections, Ames, Iowa.

It was fortunate for Iowa State and for the home economics profession that Miss Fallgatter accepted the position in which she could pass on to others the rich experience she had in home economics education. Thousands of homemaking students have benefited from her decision to come to Iowa State.¹

No course changes occurred in the home economics education curriculum during the ten-year period between 1941 and 1951. The same five courses, which had comprised the program in 1939, were continued. Table 20 lists all the undergraduate teacher preparation courses offered in home economics education from 1941-1968. Although each of these pertained to the preparation of secondary school teachers, one in particular, Methods of Teaching Adult Homemaking Classes, was specifically required for those seeking a vocational teaching certificate. This requirement remained in effect until 1951 and then, three years later, the course was dropped from the curriculum.

During the late 1940s and the early 1950s, however, the department did upgrade the academic standards required of its prospective teachers. Prior to 1947 the department required its students to achieve a quality point average of 2.1 before being admitted to their first course in education, which was Vocational Education 304, Principles of Education. Beginning in 1947 "a quality point average of 3.1, . . . [was] required for admission to all courses in education."² By 1953 this

¹Eppright and Ferguson, p. 199.

²Iowa State College Catalogue, 1947-1948, p. 223.

Table 20. Undergraduate teacher preparation courses in home economics education, 1941-1968

No.	Course Name	Year					
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
405	Observation of Teaching	X	X	X	X	X	X
406	Observation and Methods of Teaching Home Economics*	X	X	X	X	X	X
407	Supervised Teaching in Home Economics	X	X	X	X	X	X
508	Adult Education in Homemaking**	X	X	X	X	X	X
504	Special Topics in Home Economics Education	X	X	X	X	X	X
409	Planning and Evaluating the Home Economics Program						
408	Methods in Adult Homemaking Education						
505	Workshop						
507	Trends in Teaching Home Economics						
490	Special Problems						
590	Special Topics						

* Known as Methods of Teaching Home Economics from 1941-1961.

** Known as Methods of Teaching Adult Homemaking Classes from 1941-1949.

								X	X	X	X	X	1947-48
								X	X	X	X	X	1948-49
								X	X	X	X	X	1949-50
								X	X	X	X	X	1950-51
							X	X	X	X	X	X	1951-52
							X	X	X	X	X	X	1952-53
							X	X	X	X	X	X	1953-54
						X	X	X		X	X	X	1954-55
						X	X	X		X	X	X	1955-56
						X	X	X		X	X	X	1956-57
						X	X	X		X	X	X	1957-59
						X	X	X	X	X	X	X	1959-61
			X	X	X	X	X		X	X			1961-63
			X	X	X	X	X		X	X			1963-65
X	X	X	X	X	X	X			X	X			1965-67
X	X	X	X	X	X				X	X			1967-69

requirement was changed so that "a quality point average of 2.1 must be maintained for all education courses after Vocational Education 304."¹ Beginning in 1959 all prospective teachers were screened by the university-wide Teacher Education Committee, which established a 2.3 quality point average as a criterion for acceptance into a teacher education program.

Changes were more evident in the home economics program during the 1950s and the 1960s. Speaking with particular reference to the later fifties and the sixties, Eppright and Ferguson noted

. . . new developments in student teaching experience, innovations in methods of teacher training, increased efforts to provide in-service help to teachers, . . . [and] an emphasis on education for wage-earning as well as homemaking²

Beginning in 1951 all home economics majors were required to complete the recently standardized freshman and sophomore curricula which, prior to this time, had been standardized only for freshmen. This year also marked the appearance of the first new teacher preparation course to be added to the program in twelve years and a new trend toward gradual expansion. The number of courses increased from five to seven by 1959, and to eight by 1968. The new courses represented an effort on behalf of the department to keep pace with new

¹Iowa State College Catalogue, 1953-1954, p. 259.

²Eppright and Ferguson, p. 296.

developments in the field as well as to provide students with greater in-depth study experiences.

The work of the department was not limited to the improvement of on-campus opportunities for prospective teachers. It was during the fifties and sixties that the home economics education staff was

. . . continuously experimenting with ways to serve first-year teachers most effectively and to reach many teachers of the state through institutes and other types of service.¹

As the number of public schools offering home economics continued to increase, the demand for teachers in this field likewise grew. Throughout the forties, the fifties, and the sixties, Iowa State College produced approximately 100 home economics education graduates annually.² A 1947 survey conducted by the department revealed that home economics education was the largest department in terms of numbers of students. Education . . . [was] listed by 196 women as their major curriculum . . . , [and] tying for second place honors were Textiles and Clothing and Foods and Nutrition."³ Out of the 279 women who were graduated in 1952, 105 were home economics education majors, and 54 of them were teaching in Iowa.⁴

¹Ibid., p. 298.

²Ibid., p. 295.

³Iowa State Daily, February 1947, p. 6.

⁴College of Home Economics, Class AC History, Folder AC 2-4, Box No. 2, Iowa State University Special Collections Ames, Iowa.

From 1954 through 1960 the placement of the department's graduates was far below the number of positions available. The greatest discrepancy occurred in 1959-1960 when 631 vacancies were reported, and only 135 students were placed.¹

The Vocational Education Act of 1963 underscored the need for home economics teachers to prepare students for positions as wage-earners as well as homemakers. Although the department curriculum did not reflect changes in course titles in accordance with this new responsibility until the early 1970s, departmental concern was reflected earlier in faculty research. Two research projects of particular note in this field during the 1960s were: Personal values of family members and their relationship to satisfying home life and successful employment, Eleanore Kohlmann (1964-1969); and, a pilot study of employment-oriented courses in home economics for slow learners, Alberta Hill (1964-1966).²

Child development Lydia V. Swanson continued as head of the child development department until 1943 when she returned to teaching and was succeeded by Gertrude Chittenden. As one of the "original" members of the department, Professor Swanson had been instrumental in fostering its growth and development. Not only had she organized the majority of course

¹Iowa State Faculty Newsletter, 21 October 1960, p. 58.

²Eppright and Ferguson, pp. 298-299.

work, but "she pioneered in developing laboratory experiences with infants, pre-school, and older children."¹ A testimonial to Lydia Swanson's contribution to Iowa State College was her appointment as the first Mary B. Welch distinguished professor in 1957.

Gertrude Chittenden, who had joined the department in 1936, directed its work from 1943 to 1952 when she resigned to become assistant director of the Merrill-Palmer School. It was during her tenure that the department expanded its offerings in nursery school education. In 1943 a new course, Nursery School Planning, made its appearance. All undergraduate teacher preparation courses in child development from 1941 to 1968 are listed in Table 21. New developments in this field had been encouraged by the opening of nursery schools and day care centers under New Deal policies and were further stimulated by the opening of schools established by war plants during World War II for the children of working mothers.²

The growth of nursery school programs gave rise to a demand for teachers prepared in this field. Iowa State College responded with the addition of two more courses in nursery school education in 1947--Supervised Teaching in Nursery School

¹Ibid., p. 186.

²The Iowa Homemaker, January 1944, p. 16, L. Swanson, History of Child Development of the Iowa State College, 1924-1952, Iowa State University Special Collections, Ames, Iowa.

Table 21a. Undergraduate teacher preparation courses in child development, 1941-1968

No.	Course Name	Year					
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
335	Guidance in Early Childhood*	X	X	X	X	X	X
366	Activities and Materials***	X	X	X	X	X	X
465	Seminar	X	X	X	X	X	X
536	Development in Later Childhood#	X	X	X	X	X	X
555	Special Topics##	X	X	X	X	X	X
466	Principles of Nursery Kindergarten Education###	X	X	X	X	X	X
468	Administration of Program for Young Children†			X	X	X	X
467	Supervised Teaching in the Nursery School††						
568	History and Philosophy of Nursery School Education						
240	Literature for Children†††						
336	Development in Early Childhood#						
337	Development and Guidance in Later Childhood††						
490	Special Problems###						
537	Theories and Principles of Child Development						
467B	Home-School Relations						
519	Research Methods in Child Development I ^s						
581	Supervised Programming for Young Children						
445	Elementary Education Methods I						
446	Elementary Education Methods II						
467C	Student Teaching in the Primary Grades						
467D	Student Teaching in the Intermediate Grades						
375	Teaching of Reading						
444	Principles of Teaching in the Elementary School						
580	Theories and Practices in the Education of the Young Child						
545	The Community Program in Elementary Education						
520	Research Methods in Child Development II						
460	Guidance of Children						
461	Curriculum Planning for the Pre-School						
541	Education of the Gifted Child						
540	Identification and Remediation of Classroom Learning Disorders						

Table 21b. Key for Table 21a

*Known as Child Care and Training from 1941-1949.

**Designates professional education courses required for child development-elementary education majors from 1963-1963.

***Known as No. 440, Play and Play Materials from 1941-1961; No. 366, Play and Play Materials from 1961-1963.

#Known as Advanced Child Care and Training from 1941-1947; Guidance in Later Childhood from 1947-1950.

##No. 555 from 1941-1965.

###No. 556, 557, Methods of Nursery School Teaching from 1941-1947; No. 466, Methods of Nursery School Teaching from 1947-1959; Principles of Nursery Education from 1959-1963.

†No. 558, Nursery School Planning from 1943-1954; No. 468, Nursery School Planning from 1954-1957.

††No. 467 from 1947-1961.

†††No. 340 from 1950-1957.

†No. 436 from 1951-1954; No. 346 from 1954-1957.

††No. 480, Guidance in Later Childhood from 1952-1961; No. 480, Development and Guidance in Later Childhood from 1961-1965.

†††No. 355 from 1954-1957.

§Known as Research Methods in Child Development, 1961-1965.

and the History and Philosophy of Nursery School Education. In addition to providing teacher preparation courses, the department aided various Iowa communities in establishing nursery schools, provided training courses for supervisors from all over the state, and at one time cooperated with the State University of Iowa and Iowa State Teachers College in conducting a radio study club.¹ The nursery school on the Iowa State campus continued to constitute an important part of the child development program and was under the direction of Edith Sunderlin until her retirement in 1967.

Under the leadership of Glenn R. Hawkes, who became department head in 1953, the Department of Child Development further broadened its instructional program. Hawkes had received both his bachelor's and master's degrees from Utah State University and his doctorate from Cornell. He joined the Iowa State staff in 1950 and served as department head until 1966 when he resigned to become an associate dean at the University of California at Davis.

While the department's interest in young children continued, the instructional program was broadened under Hawkes to include greater emphasis on the development of children through the elementary years.

¹Eppright and Ferguson, pp. 185-186.

The objectives became: to maintain and transmit knowledge about the developmental processes; to add knowledge about the developmental processes; to offer services designed to improve conditions for children; [and] to prepare personnel dedicated to these objectives.¹

Between 1952 and 1963 courses were added in development and guidance in later childhood, theories and principles of child development home-school relations, and research methods in childhood development. Opportunities for more specialized individual study were offered through courses in special topics and special problems.

Despite the growing emphasis on later childhood during these years, Iowa State students were not being prepared for teaching in Iowa's elementary schools. Child development graduates were prepared to enter nursery school or kindergarten teaching, work in child guidance programs, become recreational supervisors, join the Extension Service, or attend graduate school.¹ The demand for elementary teachers was increasing, and the Strayer Report on Institutions of Higher Learning in Iowa in 1950 had suggested the probable need for additional programs to prepare elementary teachers. By 1958 John W. Litherland, Director of Teacher Placement at Iowa State College, noted in his annual report that the

¹Ibid., p. 279.

²News of Iowa State, 10 July 1953, p. 4.

. . . demand for teachers of elementary subjects (in which the College has no training program) continues to be the greatest, followed by teachers of English, Home Economics, Mathematics and Science.¹

This ever-increasing demand for elementary school teachers was also understood by several high-level Iowa State University administrators. Among those most conscious of this teacher shortage and most concerned about the absence of an elementary education program were James H. Hilton, President; W. Robert Parks, Vice President for Academic Affairs; Helen LeB. Hilton, Dean of the College of Home Economics; and Virgil S. Lagomarcino, Chairman of the Teacher Education Committee.²

About this time, Lagomarcino noted that while Iowa is

. . . experiencing a severe shortage of elementary teachers, Iowa colleges and universities are preparing twice as many secondary teachers as elementary teachers. The ratio ought to be reversed³

An additional concern was the fact that child development majors could become certified as elementary teachers in other states, but since they did not meet all Iowa certification requirements, they could not receive an elementary endorsement

¹Iowa State Faculty Newsletter, 5 December 1958, p. 3.

²Interview with Virgil S. Lagomarcino, Dean of the College of Education, Iowa State University, Ames, Iowa, 9 April 1975.

³Course Offerings for Teachers Broadened, News of Iowa State 14 (July, 1962): 3.

in the state of Iowa.¹

The necessity of a rapid solution to these problems became a primary concern of both Glenn Hawkes and Virgil Lagomarcino. These two men, along with several members of the vocational education department faculty, recognized that a comprehensive teacher education program could not exist unless all significant components were present. It was primarily through the efforts of Hawkes and Lagomarcino,² with the support of Dean Helen LeB. Hilton and Wayland Osborn (Iowa's director of teacher certification), that a recommendation to President Hilton for the establishment of a elementary teacher preparation program became a reality.

At the Board of Regents meeting of May 10-11, 1962, a subcommittee, known as the Committee on Educational Coordination, recommended that James A. Hilton's proposal for the establishment of a teacher preparation program in elementary education be accepted. The committee's proposal contained several recommended additions and modifications to the current program in child development. The supervised teaching course was to be broadened to include student teaching in the primary and intermediate grades. Principles of Nursery Education was to become a five-credit course, as opposed to one of four

¹Ibid.

²Interview with Bryan, 25 March 1975.

credits, and was to be entitled Principles of Nursery-Kindergarten Education. Several new courses, designed to meet Iowa certification requirements, were to be established: Teaching of Reading in the education department; Elementary Methods and Materials I and II in the child development department; and Creative Activities in Music in the music department.¹

The board subsequently adopted the committee's recommendations and authorized the University to begin offering the program in the fall of 1962. This new venture became a reality through the combined efforts of the College of Home Economics and the Department of Education.² The approval of the new program not only helped to alleviate the "critical need for more elementary teachers in the state of Iowa,"³ but it broadened the concept of the department's work still further beyond nursery school education, with which the public tended to identify it.⁴

The addition of the major in child development-elementary education greatly accelerated the expansion of the curriculum, as illustrated in Table 21. Prior to 1962 the child

¹Minutes of the Iowa State Board of Regents, May 10-11, 1962, pp. 419-420.

²Iowa State Faculty Newsletter, 22 March 1963, p. 154. The Department of Vocational Education became the Department of Education on July 1, 1962.

³Iowa State Faculty Newsletter, 18 May 1962, p. 198.

⁴Eppright and Ferguson, p. 281.

development department offered 11 courses germane to teacher preparation. By 1963 six courses had been added, and by 1967 a total of 26 courses appeared in the curriculum. In addition to those courses which were recommended for establishment of the new major in 1962, the department added work in principles of teaching, theories and practices of education, guidance, research methods, curriculum planning, and education of the gifted and the disadvantaged. This diverse curriculum provided students with the opportunity to select one of three separate majors: child development-elementary education, which prepared teachers for grades K-6; child development, which prepared graduates for work with children ten and under in agencies, institutions, recreational programs, or nursery schools; and child development and related sciences for those who planned to pursue graduate study.¹

A clear indication of both the need for and success of the child development-elementary education program can be seen from enrollment figures. In the fall of 1962, 33 students enrolled in the child development-elementary education curriculum. By 1966 there were 420 elementary education majors. By 1967 elementary education majors accounted for two-thirds of the total child development enrollment and outnumbered home economics education and applied art majors.² Clearly, the new

¹Iowa State University Catalogue, 1965-1967, pp. 173-174.

²Iowa State Daily, 14 April 1967, p. 1.

major meant that the University at last offered something for girls who for many reasons wanted Iowa State but not one of its traditional programs.

By 1966 student enrollment in child development-elementary education had increased so rapidly that Professor Hawkes decided to limit the number of enrollees to 100. He made the further stipulation that students in excess of this number would be required to declare a different major and transfer to elementary education at a later date. The primary reason for limiting the number of major students was inadequate facilities.¹

Following Professor Hawkes resignation in 1966, the department came under the direction of Bruce Gardner, who held joint appointments in the Department of Child Development and the Department of Psychology. Commenting on the goals of the department in 1967, Gardner noted that additional laboratory space, classroom facilities, and faculty offices were top priorities. He also noted that the acquisition of additional, well-trained staff members and the consolidation of the entire education program into one area (a college of education) would be very desirable.²

¹Iowa State Daily, 5 April 1966, p. 1.

²Iowa State Daily, 14 April 1967, p. 1.

Vocational education

The vocational education department remained within the Division of Agriculture and continued to administer all teacher education programs with the exception of home economics and elementary education. Men who served as Deans of the Division of Agriculture during these years included: Charles F. Curtiss (1902-1932); R. M. Hughes (Acting Dean, 1932-1933); Herbert H. Kildee (1933-1949); and Floyd Andre (1949-1968). Between 1941 and 1968 the vocational education department administered undergraduate programs for prospective teachers in three major areas: general vocational education,¹ agricultural education, and industrial education. Because the program in general vocational education was directed by the head of the department, changes in this program are discussed along with departmental developments. The other two programs were directed by individuals appointed to supervise these programs by the head of the department, and each is discussed individually later in this section.

The department continued under the direction of Barton Morgan until March, 1950, when due to poor health he relinquished his administrative duties but remained on the teaching staff. In 1941 the program in vocational education was redesignated as general vocational education. At this time,

¹General vocational education included the professional core courses in teacher education.

courses related to education in rural schools were organized into a rural education program, which was designed for school administrators and was conducted primarily on the graduate level. Thus, in 1941, the program in general vocational education was composed of a total of 13 separate courses, only one of which was new to the program. These courses covered such topics as principles of education, methods of teaching, educational statistics, evaluation, curriculum, administration of the guidance program, and special topics. Visual Methods in Education (which became Audio-Visual Methods in Education in 1947) was the new addition, and it became a permanent offering. All undergraduate teacher preparation courses in general vocational education offered between 1941 and 1968 are listed in Table 22.

General vocational education continued to show gradual expansion during the latter years of Morgan's tenure. A workshop course which provided experiences in a variety of fields was introduced in 1945, and a course in radio education was added the following year. In the same year, The High School Pupil and Fundamentals of Vocational Education were dropped.

Following the war the demand for more specialized training in guidance and counseling and adult education matured. To meet this need, Ray James Bryan was hired in 1946 specifically to "beef-up" the guidance and counseling program at Iowa State

544 Administration of Material Facilities in
Education
545 The Community Program of Elementary
Education
547 Supervision of Instruction in Elementary and
Secondary Schools
575 Fundamentals of School Law
548 Educational Policy-Making and Interpretation
596 Curriculum Construction
375 The Teaching of Reading
515 Evaluation of Educational Outcomes
549 School Buildings
555 Organization and Administration of the
Junior High School
537 Methods of Teaching Adults
532 Guidance Services in the Elementary School

^aAfter July 1, 1962 known as Education.

* Course No. 304 from 1941-1953.

** Known as Special Topics from 1941-1949.

*** Known as Administration of the Guidance Program from 1941-1959.

Known as Visual Methods in Education from 1941-1947.

Prior to 1945 was Educational Statistics, 552, only.

Known as Occupations from 1948-1949.

Table 22 (Continued)

No.	Course	Years										
		1952-53	1953-54	1954-55	1955-56	1956-57	1957-59	1959-61	1961-63	1963-65	1965-67	1967-69
204	Principles of Education*	X	X	X	X	X	X	X	X	X	X	X
305	Methods of Teaching	X	X	X	X	X	X	X	X	X	X	X
404	The High School Pupil											
426	Principles of Secondary Education	X	X		X	X		X	X	X		
490	Special Problems**	X	X	X	X	X	X	X	X	X	X	X
534	Administration of the Guidance Service***	X	X	X	X	X	X	X	X	X	X	X
535	Evaluation of Educational Outcomes	X	X	X	X	X	X					
550	Audio-Visual Methods in Education#	X	X	X	X	X	X	X	X	X	X	X
552,553	Educational Statistics##	X	X	X	X	X	X	X	X	X	X	X
554	Fundamentals of Vocational Education											
561,562	Problems in Educational Methods											
565	Curriculum Construction											
590	Special Topics	X	X	X	X	X	X	X	X	X	X	X
593	Workshop	X	X	X	X	X	X	X	X	X	X	X
580	Broadcasting for School Use											
409	Principles and Practices of Conservation Education											
533	Counseling of High School Students	X	X	X	X	X	X	X	X	X	X	X
536	Adult Education	X	X	X	X	X	X	X	X	X	X	X
434	Supervised Practice in Guidance	X	X									
551	Occupational Information###	X	X	X	X	X	X	X	X	X	X	X
584	History of Education	X	X	X	X	X	X	X	X	X	X	X
591	Supervised Field Experience			X	X	X	X	X	X	X	X	X
530	Principles and Practice of Guidance							X	X	X	X	X
531	Analysis of the Individual							X	X	X	X	X
541	Introduction to Educational Administration								X	X	X	X
542	The Community Program of Secondary Education								X	X	X	X
543	Administration of School Personnel								X	X	X	X

544	Administration of Material Facilities in Education	X	X	X	X
545	The Community Program of Elementary Education	X	X	X	X
547	Supervision of Instruction in Elementary and Secondary Schools	X	X	X	X
575	Fundamentals of School Law	X	X	X	X
548	Educational Policy-Making and Interpretation		X	X	X
596	Curriculum Construction		X	X	X
375	The Teaching of Reading			X	X
515	Evaluation of Educational Outcomes			X	X
549	School Buildings			X	X
555	Organization and Administration of the Junior High School			X	X
537	Methods of Teaching Adults				X
531	Guidance Services in the Elementary School				X

and, also, to serve as Director of Teacher Placement.¹ During Bryan's first several years on the staff five more courses, which dealt with guidance and counseling and adult education, were added. During the same period two courses were dropped. Thus, the net gain between 1941 and 1950 was three courses.

In addition to this expansion of course work, emphasis on departmental research and publication continued, and efforts were directed toward acquiring new staff members who were of the highest academic caliber.² A further development was the implementation of the off-campus program, for both graduates and undergraduates, in 1947. The first course in the field of guidance was offered at State Center, Iowa, through the combined efforts of Ray Bryan and John Litherland.³

When asked to comment specifically upon the strengths of the vocational education department during his administration, Morgan noted the following: a strong subject-oriented staff, which was highly interested in serving their state, their college, and their students; the support and cooperation of key university administrators, such as President Friley, Dean Buchanan of the Graduate College, Dean Agg of Engineering, and Dean Nelson of Home Economics; and the students who were, on

¹Interview with Morgan.

²Ibid.

³Interview with Bryan, 29 April 1975.

the whole, a serious and academically well-qualified group as well as industrious and highly motivated.¹

Mr. Morgan's efforts to expand and strengthen vocational education did not, unfortunately, always meet with unanimous approval. While Morgan was quick to point out that no one department or administrator hindered the growth of the vocational education department, certain professors from other disciplines (notably physics and chemistry) criticized the department for its lack of objectivity.² According to Morgan, this criticism was not well founded since "academic respectability should be based on doing the best one can with the content and tools available."³ Content of the program was not at fault, but budgetary limitations, which were beyond Morgan's control, coupled with a "loose organizational" structure, which resulted from the absence of one central coordinating body, were the two most serious departmental weaknesses.

Ray J. Bryan was chosen to succeed Barton Morgan as head of the vocational education department. His academic training and administrative experience coupled with the wide respect in which he was held by both the vocational education staff and the college administration, including President Friley,

¹Interview with Morgan.

²Morgan to Weller, 18 January 1975.

³Ibid.

resulted in his appointment.¹ On July 1, 1950, Bryan was named acting head of the vocational education department, and in 1951 he was officially appointed head of the department.² Barton Morgan noted the confidence shown in Bryan by recalling the overwhelming majority vote of staff members which approved his official appointment as head of the department.³

Professor Bryan had come to Iowa State with an impressive background. He had received his B.S. and M.S. degrees from Kansas State University in 1933 and 1937, respectively, and his Ph.D. from the University of Nebraska in 1940. From 1933 to 1938 he had served as both a teacher and an administrator in Kansas public schools. From 1940-1941 Bryan served as director of teacher training at Kansas Wesleyan University. In 1941 he went to Nebraska State Teachers College and served first as head of the education department and supervisor of the campus school and later, from 1944 to 1946, as dean of the college.⁴

Course expansion in general vocational education continued under the leadership of Ray Bryan. Between 1950 and 1961 four

¹Ibid.

²Clarence Bundy served as interim acting head of the Department of Vocational Education for a brief period from March, 1950 to July 1, 1950.

³Interview with Morgan.

⁴Iowa State Faculty Newsletter, 7 September 1968, p. 18.

new courses were added while three were dropped. The new work was in history of education, supervised field experience, and guidance and counseling. Then, in 1961, the curriculum literally exploded with the addition of seven new courses. As can be seen in Table 23, three of these dealt with educational administration, two with community programs of education, one with supervision of instruction, and one with school law.

In addition to directing the continued expansion of the program in general vocational education, Bryan was actively involved in upgrading other programs and providing new departmental services. One of his major concerns was the development of closer cooperation among all academic disciplines offering teacher preparation programs. In 1950 Bryan was asked to chair the Teacher Education Committee¹ which had just been appointed by President Charles Friley.

Bryan developed and implemented off-campus courses in guidance and counseling as well as expanding the off-campus program in agricultural education. By dividing the state into six areas and rotating the courses offered among these areas, he assured adequate coverage and service throughout the state.

Another area of particular interest to Ray Bryan was the Itinerant Teacher Trainer program, which had been in effect

¹The composition of this committee along with its specific tasks and accomplishments are discussed in a later section of this investigation entitled, Teacher Education Committee.

since 1917 when funds were first made available from the Smith-Hughes Act. The primary objective of the program was to provide vocational teachers for Iowa's secondary schools. In order for a tradesman to teach his trade in an Iowa high school, he was required to have a minimum of three years practical experience and to have satisfactorily completed four professional education courses. The task of the itinerant teacher from Iowa State was to provide on-site course instruction to these craftsmen in the art and science of teaching. This "over-the-shoulder" method of preparing teachers was greatly expanded during the 1950s under the direction of Ray Bryan and Lowell Carver and through the efforts of Professors Arthur Twogood, Alvie Sargent, and Orin Shavel.¹

During the decade of the 1950s the basic professional education course sequence was "overhauled" and "reworked" into a more logical progression of aims and objectives. Under Bryan's leadership and with the cooperation of the faculties in both departments, courses in psychology and professional education were evaluated and reworked to more fully meet both the course and program objectives. This revitalization effort resulted in the emergence of a more coherent and more orderly course sequence.²

¹Interview with Bryan, 25 March 1975.

²Interview with Bryan, 29 April 1975.

In their meeting of March 8-9 in 1962, the Educational Policy Committee of the Board of Regents, at the request of Iowa State's President James Hilton, recommended that the Department of Vocational Education be renamed the Department of Education. This recommendation was in turn referred to the Regents Committee on Educational Coordination.¹ Following committee discussion and approval, it was recommended in the Regents meeting of May 10-11, 1962 that the name change become effective July 1, 1962.²

In requesting the name change the university administration offered the following rationale:

1. The title "Vocational Education" did not properly describe the scope and content of the department's offerings. Of the 289 graduates with secondary teaching certificates in 1962, 169 (58.4%) had majored in nonvocational curricula.
2. The title "Vocational Education" courses caused Iowa State graduates inconveniences in obtaining out-of-state certification. Explanations were required to the effect that vocational education course content at Iowa State was identical to that of education courses in other institutions.
3. The National Council for the Accreditation of Teacher Education (NCATE) strongly recommended that "vocational" be deleted from the department's title.³

¹Minutes of the Iowa State Board of Regents, March 8-9, 1962, p. 335.

²Minutes of the Iowa State Board of Regents, May 10-11, 1962, p. 420.

³Iowa State Faculty Newsletter, 18 May 1962, p. 197.

Bryan continued as head of the Department of Education and expansion of educational course work continued. Between 1963 and 1968 a total of eight new courses were added and none were dropped. In addition to further work in adult education and guidance, new courses represented such diverse areas as educational policy formation, curriculum construction, teaching of reading, evaluation, school buildings, and organization and administration of the junior high school. Between 1947 and 1968 course offerings in general vocational education had more than doubled. A further addition to the teacher education program occurred in 1967; this was the establishment of the Media Resource Center funded by a grant of \$27,734 from the Department of Health, Education and Welfare which was matched by the university.¹ In conjunction with the students' work in Education 305, Methods of Teaching, the center provided instruction in the operation and utilization of audio-visual equipment in the classroom and in the development of teaching aids and materials.

Particular strengths of the department under Bryan's guidance included: (1) cooperation with the department of public instruction in a leadership role in developing working relationships with the schools to establish teacher education policies and programs and in establishing teacher workshops

¹Iowa State Daily, 15 September 1967, p. 9.

and career day programs; (2) the development of campus-wide programs in teacher education through the nurturing of a cooperative philosophy among teacher education departments, while insuring individual department authority with respect to the selection of students, the teaching of methods courses, and the supervision of student teachers; and, (3) the development of more systematic instruction throughout the teacher education programs and the high competence of the staff, which emphasized both teaching and research and believed in personalized student counseling. On the other hand, departmental weaknesses by 1966 included a lack of adequate space and instructional materials and a lack of "united leadership" for all the various teacher education work.¹ The department apparently felt that this last weakness could have been remedied through the establishment of a College of Education. It is interesting to note that Barton Morgan had noted similar strengths and weaknesses fourteen years earlier.

Despite the acknowledged weaknesses, the Department of Education was doing a highly effective job of preparing its students for careers in teaching. In student teaching alone between 1961 and 1964, more than 570 students had engaged in

¹Department of Education, Data for North Central Association Accreditation Visit, May 15-19, 1966, p. 124. This report was furnished to the author by Virgil S. Lagomarcino, Dean of the College of Education, Iowa State University, Ames, Iowa.

practice teaching in more than 50 Iowa communities.¹ Also, in its 1966 report, The American Association of Colleges for Teacher Education stated that between September, 1965, and August, 1966, Iowa State ranked fourth in Iowa in producing certified teachers. Iowa State had awarded 355 bachelor's degrees, 78 in elementary education and 277 in secondary education. At the secondary level Iowa State ranked second only to the University of Northern Iowa.²

Agricultural education The curriculum in agricultural education continued to remain within the Division of Agriculture and under the jurisdiction of the vocational education department. Only after the College of Education was founded in 1968 was this curriculum recognized as an independent department.

Iowa State's program in agricultural education was perhaps one of the strongest courses of study in the nation in terms of subject matter preparation.³ Majors were required to

. . . include a minimum of eighteen credits in each of the following fields: agronomy, animal husbandry, agricultural engineering, and economics and sociology. This minimum is

¹Figures compiled from Faculty Newsletters of 7 December 1962, p. 81; 4 October 1963, p. 38; and 9 October 1964, p. 42.

²Iowa State Faculty Newsletter, 17 November 1967, p. 103.

³Interview with Clarence E. Bundy, Professor of Education (retired), Iowa State University, Ames, Iowa, 8 May 1975.

exceeded in most cases and is supplemented by courses in dairy industry, forestry, horticulture, and landscape architecture.¹

Complementing this strong preparation in agricultural education was the course sequence in professional education, which included two special methods courses in supervised teaching and adult education and a number of different options students could select within the special problems course. Moreover, required courses in vocational education, psychology, and the principles of American government were incorporated into the individually designed programs in order to meet Iowa certification requirements.

Strengths of the agricultural education curriculum existed in many areas, according to Professor Clarence E. Bundy, who was head of the program between 1957 and 1973. First, the purpose of the program--to prepare teachers of agriculture--was coupled with an educational philosophy deeply rooted in the tradition of John Dewey. To this end, the course of study espoused the theory of learning by doing, the child-centered concept (in this case, emphasis on the welfare of the student), and the belief that teaching was a service, not just a job. Three men were primarily responsible for promoting this philosophy: W. H. Lancelot, head of the Department of Vocational Education; Herbert M. Hamlin, supervisor of student

¹Iowa State College Catalogue, 1941-1942, p. 143.

teaching in agricultural education; and Theodore E. Sexauer, well-known specialist in adult education and member of the agricultural education department.

Second, in-class work was complemented by on-site visitations to local farms which were utilized essentially as laboratory experiences. Here, the practical aspects of agriculture could be observed and compared to theories presented in the classroom.

Third, under the direction of a well-education staff, students not only received individualized counseling and program construction, but they were exposed to quality teaching techniques by their instructors. Also, under the direction of Professor Sexauer in his adult education classes, students were equipped to teach adult farmer classes in local communities. These classes were independent of those conducted by agricultural extension personnel.

Fourth, the high quality students attracted to agricultural education greatly strengthened the program. The students were hard-working, industrious youths, who were well-trained in Future Farmers of America programs and who came to Iowa State from high schools with strong vocational agriculture programs.¹

¹Interview with Bundy.

Still another strength of the program was the staff's continuing commitment to improvement of instruction. Results of a twenty-year survey of agricultural education graduates between 1932 and 1952 reinforced the faculty's determination to provide the best possible program for its students. As a result, the agricultural education faculty gave added attention to perfecting lecture techniques, discussion methods, laboratory experiments, and its resident teaching program.¹ Directed toward the same ends, senior majors annually rated both courses and instructors with reference to course content and teaching methods. Information from these rating scales were continuously used in maintaining a sound and relevant program.²

In 1957 Clarence E. Bundy was appointed head of the curriculum in agricultural education. A native Iowan, Bundy and his parents moved to Minnesota after his graduation from high school in 1925. In 1929 he received his B.S. with a major in agriculture and science from Iowa State College and later, in 1938, a master's degree from the same institution. After serving both as a teacher and as a principal for 18 years at Iowa Falls (Iowa) High School, Bundy joined the Iowa State staff in 1947 as an assistant professor. There he taught

¹Your Division of Agriculture Reports, Farm Service (April, 1954): 17, College of Agriculture, Class No. AA, Folder: AA 1-1, Newspaper Clippings, Iowa State University Special Collections, Ames, Iowa.

the basic educational methods course in agricultural education. A former student of both Lancelot and Sexauer, Bundy adhered to his mentors' philosophy that education was a service and that teaching by example in the classroom was all-important.

During the sixteen years (1957-1973) that Professor Bundy was head of agricultural education, he continued the basic program which had remained largely unchanged since 1941. The only new course out of the ten which were offered in 1941 was Young Farmers and Adult Education. All undergraduate teacher preparation courses in agricultural education offered between 1941 and 1968 are listed in Table 23. In 1945 two more courses were added--Recent Developments in Agricultural Education and Workshop in Agricultural Education. The former lasted only two years, while the latter became a permanent part of the curriculum. Two other changes occurred prior to Bundy's appointment as director of the program; a course in adult education was dropped in 1947, and a methods course for teaching vocational agriculture in high school was instituted in 1955.

The nucleus of courses which was offered under Bundy and his predecessors included work in the observation and survey of agricultural education, in curriculum planning and evaluation, in supervised teaching, in methods, in adult education, and in special problems and topics. This broad-based background, plus the other technical and professional courses

Table 23. Undergraduate teacher preparation courses in agricultural education, 1941-1968

No.	Course Name	Year					
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
211	Observation and Survey of Programs of Education in Agriculture*	X	X	X	X	X	X
321	Planning and Evaluating the Program in Vocational Agriculture**	X	X	X	X	X	X
425	Supervised Teaching and Observation in Agriculture***	X	X	X	X	X	X
490	Special Problems	X	X	X	X	X	X
415	Teaching Farm Mechanics#	X	X	X	X	X	X
536	Adult Education	X	X	X	X	X	X
537	Methods of Teaching Adults	X	X	X	X	X	X
538	Young Farmer Education in Agriculture##	X	X	X	X	X	X
590	Special Topics	X	X	X	X	X	X
424	Young Farmers and Adult Education in Agriculture	X	X	X	X	X	X
520	Recent Developments in Agricultural Education					X	X
593A	Workshop in Agricultural Education					X	X
423	Methods of Teaching Vocational Agriculture in High School						
539	Farming Programs and Employment Training in Agriculture###						
540	Educational Implications of Occupational Adjustment in Agriculture						

*Known as Observation and Survey of Agricultural Education from 1941-1955.

** Known as Special Methods in Agricultural Education from 1941-1954

*** Known as Supervised Teaching in Agriculture from 1941-1953.

Known as No. 515, Teaching Farm Shop from 1941-1945; No. 515, Teaching Farm Mechanics from 1945-1955.

Known as Part-Time Education in Agriculture from 1941-1950.

Known as Farming Programs in Vocational Agriculture from 1963-1965.

				X	X	X X X	X X X	X	X	1947-48
				X	X	X X X	X X X	X	X	1948-49
				X	X	X X X	X X X	X	X	1949-50
				X	X	X X X	X X X	X	X	1950-51
				X	X	X X X	X X X	X	X	1951-52
				X	X	X X X	X X X	X	X	1952-53
				X	X	X X X	X X X	X	X	1953-54
				X	X	X X X	X X X	X	X	1954-55
		X	X	X	X	X X X	X X X	X	X	1955-56
		X	X	X	X	X X X	X X X	X	X	1956-57
		X	X	X	X	X X X	X X X	X	X	1957-59
		X	X	X	X	X X X	X X	X	X	1959-61
		X	X	X	X	X X X	X X	X	X	1961-63
X	X	X	X	X	X	X X X	X X	X	X	1963-65
X	X	X	X	X	X	X X X	X X	X	X	1965-67
X	X	X	X	X	X	X X	X X	X	X	1967-69

required of major students, were necessary to adequately equip them to perform functions in addition to teaching upon graduation. Not only was the Iowa State agricultural education graduate a teacher of high school agricultural classes, he was also called upon to organize and conduct instructional programs for young and adult farmers, to advise the local chapter of the Future Farmers of America, and to act as a consultant in crop and livestock production.¹

Bundy's efforts to improve the program still further were expended in several directions. Although much of the groundwork had been laid prior to his administration, many improvements matured under his direction. The first off-campus courses had been offered at Hampton, Iowa, in 1955 by Bundy himself. These were followed by the initiation and gradual enlargement of in-service programs including summer courses and workshops. Student teaching was expanded to include one to three weeks of interim teaching. This arrangement provided student teachers, who usually taught during the last six weeks of the quarter, with an opportunity to go into the school at the beginning of the year and become acquainted with the facilities, staff, and students prior to beginning his student teaching.

¹Teaching Vocational Agriculture as a Career, p. 1. Agricultural Education, Class No. AA-13, Box No. 1, Folder No. 1-16, Iowa State University Special Collections, Ames, Iowa.

Bundy also introduced new courses and continued to improve other facets of the program. The two courses introduced in 1963 brought the total number offered by the department to twelve. The new courses dealt with off-farm occupational experiences--a topic which was receiving greater emphasis in high school vocational agriculture programs. He encouraged the wide use of audio-visual materials as teaching aids and promoted the greater utilization of field trips to local farms. Furthermore, he believed in and developed his teaching around the problems of the beginning teacher. He went so far as to present first-year teachers' experiences and their problems as specific classroom case studies to better prepare those who were soon to join the teaching ranks.¹

The expansion of vocational agricultural programs in Iowa high schools and among young farmers, adults, and veterans between 1941 and 1968 resulted in the constant demand for well-prepared teachers. Iowa State College played a large role in preparing personnel to lead these programs.

Iowa State College has prepared more than 800 students to enter the field of vocational agriculture teaching. In addition to the 225 teaching vocational agriculture in Iowa, there are about 470 teaching institutional on-farm-training classes for veterans in 201 high schools in the state.²

¹Interview with Bundy.

²Teaching Vocational Agriculture as a Career, p. 2.

Placement Office figures for the 1950s offered further indication of the large demand for agricultural education teachers. Figures for the years between 1952 and 1960 showed a total of 894 vacancies and placement of 393 Iowa State graduates.¹ As expansion of Iowa high school programs continued into the 1960s, the demand for Iowa State graduates in agriculture continued to exceed the available supply.

Industrial education Industrial education as a major field of study continued to function within the Department of Vocational Education. The one man who was perhaps most responsible for the development and growth of industrial education between 1941 and 1968 was Lowell L. Carver. Having graduated from Collins High School in southeast Story County, Iowa, in 1922, Carver subsequently attended Iowa State College. He remained there only one year, however, before returning to his home to take up farming. He later enrolled at the State College of Iowa² from which he received his bachelor of science degree in 1930. With a major in coaching and athletics and a minor in industrial arts, Carver taught school in several Iowa communities. In 1937 he earned a master of science degree in industrial arts from Iowa State College. In 1939

¹Iowa State Faculty Newsletter, 5 December 1958, p. 3; Iowa State Faculty Newsletter, 21 October 1960, p. 58.

²Formerly known as Iowa State Teachers College.

Carver was asked by Professor Morgan and Dean Kildee to return to Iowa State to direct the undergraduate laboratory classes. He accepted and remained in this capacity until 1946 when he became director of the entire undergraduate program in industrial education. Carver served as director of this program until his semi-retirement in 1970, followed by full retirement in 1973.

During Carver's early association with industrial education, the program showed continuous expansion. Three new courses appeared in 1941--Special Problems, Visual Methods in Education, and Play Equipment. Table 24 lists all undergraduate teacher preparation courses offered in industrial education from 1941-1968. Special Problems remained in the curriculum throughout this period, but Visual Methods was dropped after 1947 and Play Equipment after 1951. A course in supervised teaching was added in 1944 and three more courses in 1945. Two of these courses--Methods of Teaching Industrial Arts and Workshop in Industrial Education became permanent departmental offerings. The third course, Recent Topics in Industrial Education, was offered for only a brief two-year period.

The program in industrial education provided students with a broad array of technical and nontechnical courses. For example, students took courses in "drawing, woodwork, metal work, electricity, craft, radio, and welding. These were in

Table 24. Undergraduate teacher preparation programs in industrial education 1941-1969

No.	Course Name	Year					
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
150	Introduction to Industrial Education*	X	X	X	X	X	X
409	Shop Planning and Organization**	X	X	X	X	X	X
325	Play Equipment	X	X	X	X	X	X
555	Administration and Supervision of Industrial Education***	X	X	X	X	X	X
456	General Shop	X	X	X	X	X	X
490	Special Problems in Industrial Education	X	X	X	X	X	X
510	Techniques of Teaching Trades and Technical Education#	X	X	X	X	X	X
514	Foundations of Industrial Education	X	X	X	X	X	X
515	Teaching Industrial Education##	X	X	X	X	X	X
518	Problems in Industrial Education	X	X	X	X	X	X
519	Trade Analysis and Course Construction###	X	X	X	X	X	X
525	Coordination in Part-Time Industrial Education†	X	X	X	X	X	X
590	Special Topics	X	X	X	X	X	X
550	Visual Methods in Education	X	X	X	X	X	X
551	Industrial Occupations	X	X	X	X	X	X
416	Supervised Student Teaching in Industrial Arts			X	X	X	X

*Known as Elementary Teaching Problems in Industrial Arts from 1941-1949 and Introduction to the Teaching of Industrial Arts from 1949-1956.

**Known as No. 309, Shop Planning from 1941-1949 and No. 309, Shop Planning and Organization from 1949-1959.

***Known as No. 455, Organization and Administration of Industrial Education from 1941-1945.

#Known as Techniques of Teaching Trades from 1941-1967.

##Course No. 515, 516 from 1941-1943; known as Teaching Industrial Arts from 1941-1949.

###Known as Trade Analysis from 1941-1967.

†Known as Problems in Part-Time Industrial Education from 1941-1949.

X	X	X X	X	X X X X	X X X	X X X	1947-48
X	X	X X	X	X X X X	X X X	X X X	1948-49
X		X X	X	X X X X	X X X	X X X	1949-50
X		X X	X	X X X X	X X X	X X X	1950-51
X		X X	X	X X X X	X X X	X X	1951-52
X		X X	X	X X X X	X X X	X X	1952-53
X		X X	X	X X X	X X X	X X	1953-54
X		X X	X	X X X	X X X	X X	1954-55
X		X X	X	X X X	X X X	X X	1955-56
X		X X	X	X X X	X X X	X X	1956-57
X		X X	X	X X X	X X X	X X	1957-59
X		X X	X	X X X	X X X	X X	1959-61
X		X X	X	X X X	X X X	X X	1961-63
X		X X	X	X X X	X X X	X X	1963-65
X		X X	X	X X X	X X X	X X	1965-67
X		X X	X	X X X	X X X	X X	1967-69

Table 24 (Continued)

No.	Course Name	Year					
		1941-42	1942-43	1943-44	1944-45	1945-46	1946-47
415	Methods of Teaching Industrial Arts					X	X
556	Recent Topics in Industrial Education					X	X
593D	Workshop in Industrial Education					X	X
154	Drawing for Teachers of Agriculture						
354	Teaching Secondary School Drawing						
357	Electronics I ^{††}						
350	School and Safety Education						
557	Organization and Management of the School Shop						
400	Electronics II						
516	Trends in Vocational-Industrial Education						
528	Public Relations for Industrial Education						

^{††}Known as Elementary Radio Construction and Service from 1949-1963.

					x	x	1947-48
						x	1948-49
					x	x	1949-50
					x	x	1950-51
					x	x	1951-52
					x	x	1952-53
					x	x	1953-54
					x	x	1954-55
					x	x	1955-56
					x	x	1956-57
					x	x	1957-59
					x	x	1959-61
					x	x	1961-63
		x	x		x	x	1963-65
		x	x		x	x	1965-67
x	x	x	x		x	x	1967-69

addition to work in education, psychology, English, economics, history, mathematics, and sciences."¹ One quarter of practice teaching was also required of each industrial education major, as well as a period of at least 12 weeks experience in a trade or an industry prior to graduation.

Under Carver's leadership, four new courses were added to the curriculum between 1949 and 1951. Expansion at this time was primarily designed to meet the needs of returning war veterans. The decade of the 1950s witnessed a demand for industrial education graduates of Iowa State College which far exceeded the supply. Between 1952 and 1960 the College Placement Office recorded 1,679 vacancies, and only 195 industrial education majors had been placed.²

Professor Carver maintained that expansion of the industrial education program and revision of course content was based on the needs of students in relation to technological developments, both outside and inside education. Carver noted that during his tenure at Iowa State,

we always knew that we had an obligation to the state of Iowa, and we constantly tried to produce the kinds of teachers its schools needed.³

¹Interview with Lowell L. Carver Professor of Education (retired), Iowa State University, Ames, Iowa, 30 April 1975.

²Iowa State Faculty Newsletter, 21 October 1960, p. 58.

³Interview with Carver.

Still further changes occurred in the 1960s. In 1961 Carver introduced a new course option for those not interested in teaching. The "Industrial Option" prepared students for employment or administrative positions in industry or graduate work. The curriculum continued to expand with the addition of two more courses in 1963 and another two in 1967.

During the twenty-seven years between 1941 and 1968, the program in industrial education had grown from a total of fifteen courses to twenty-one courses. One of the major strengths of the department throughout these years was the high-quality students attracted to the program. Many of these students, according to Carver, were engineering majors who had transferred into industrial education. The broad-based program was, in itself, an important strength. The practical aspect of education was emphasized through laboratory and required work experiences, while the theoretical side was imparted in the classroom. Carver noted that an additional strength was a high-quality staff who cared about their students and provided them with as much individual direction and guidance as possible.¹ The concern of the staff also extended beyond the walls of Iowa State College to individual schools in Iowa. Members of the staff volunteered their time, upon invitation, to aid schools with various instructional

¹Ibid.

concerns in the area of industrial education.¹

Despite the growth of the industrial education program, there were definite weaknesses. According to Carver, the most serious weakness was the fact that industrial education was not accorded full department status during this period. As a result, the stature of the program across the college campus suffered to some extent. The program was apparently also handicapped to some degree by the lack of sufficient monies with which to attract additional highly skilled professors and to obtain more adequate and less crowded accommodations.

Physical education for men

George F. Veenker continued to serve as head of the men's physical education department until 1947. Courses were neither added to nor dropped from the curriculum between 1941 and 1947. The only change in the teacher preparation work, which occurred during Veenker's later years, was the offering of three courses on an annual rather than an alternate year schedule. These three courses were: Principles of Physical Education, Methods of Teaching Physical Education, and Organization and Administration. Thus, beginning in 1941, the department offered a total of seven courses annually.

¹Ibid.

It is also important to note that as a direct result of World War II, the undergraduate instructional activities portion of the program was changed and intensified. In 1943 the department began to shift its emphasis more toward strengthening the physical stamina of students through work in calisthenics, cross country, combatives, and on an obstacle course. In this program of compulsory conditioning, students were required to take additional physical work in the above areas three times a week instead of the two regularly scheduled meetings per week.¹ This intensified program continued for the duration of the war.

In 1947 Louis E. Menze succeeded George Veenker as head of the department. Menze received his B.S. degree from Missouri State Teachers College in 1922. He taught for several years at Central High School in Kansas City, Missouri, and then, in 1928, came to Iowa State to coach basketball. He later coached football as well as basketball and, in 1945, was appointed athletic director.² Under the leadership of Louis E. Menze, teacher preparation courses in physical education began to proliferate rapidly. A new course in history and one in community and industrial education appeared in 1947 as well

¹The Alumnus of Iowa State College, February 1944, pp. 129-130.

²Physical Education for Men, Box No. 1, Folder No. 1-20, Iowa State University Special Collections, Ames, Iowa.

as three new courses in physical education activities. Table 25 lists all undergraduate teacher preparation courses in physical education for men which were offered from 1941 to 1968. Further expansion occurred in 1949 with the addition of courses which emphasized leadership in physical education, techniques and rules of officiating, and organization and administration of intramural programs, particularly on the secondary level. A course in gymnastics appeared in 1950. Then, in 1953, the special problems course, which had been discontinued after 1940-1941, was restored to the program. With the single exception of Community and Industrial Education, which was dropped in 1961, all these courses were taught annually throughout the period.

The combined major program, (a major in physical education combined with a 27 credit minor in another science), continued to be offered until 1951. At this time this specific program was dropped, and students were allowed to major in physical education and to choose two supportive minor fields of study. This program required the completion of 30 credits in physical education and 15 credits in each of the minor fields. This brought the men's physical education program in line with long-established university policy in other fields. Possible minor subject areas covered a broad range of fields, including such diverse areas as individual sciences, history or government, English, speech, industrial education, general science,

Table 25. Undergraduate teacher preparation courses in physical education for men, 1941-1968

No.	Course Name	Year	
		1941-42	1942-43
309	Athletic Training	X	X
314,315,316,317	Coaching Athletic Sports	X	X
411,412,413	Supervised Teaching in Physical Education	X	X
214,215,216	Football, Basketball, Track & Field Techniques*	X	X
217,218	Baseball and Advanced Swimming Techniques		
391	Principles of Physical Education**	X	X
497	Methods of Teaching Physical Education***	X	X
493	Organization and Administration	X	X
219	Wrestling Techniques#		
220	Physical Education Activities		
318	History of Physical Education		
494	Community and Industrial Education		
213	Introduction to Physical Education		
301,302,303	Football, Basketball, Baseball Officiating		
212	Gymnastics		
319	Organization and Administration of Intramural Athletics		
490	Special Problems		
481,482,483	Leadership in Supervised Recreation		
484	Supervised Recreation Program Development		
485	Organization and Administration of Supervised Recreation		
495	Program Development in Physical Education		
496	Tests and Measurements in Physical Education		
492	Human Relationships Aspects of Coaching		
384	An Introduction to Supervised Recreation		

*Known as Courses No. 304,305,306, Physical Education Techniques from 1941-1947.

**Course No. 491 from 1941-1967.

***Course No. 492 from 1941-1961; Course No. 392 from 1961-1965.

#Known as Physical Education Activities from 1947-1957.

vocational education, religious education, technical journalism, and radio broadcasting. Each student's program was individually prepared by the student in conference with the head of the department and, thus, was tailored to each student's individual needs. This program continued without change throughout the period.

In the latter 1950s the men's physical education department began to become more flexible with respect to "required" activity courses for freshmen and sophomores. A specific example of this departmental liberalization was allowing the substitution of a high school letter won in a major sport (football, basketball, or baseball) for a required activity course. Similarly, students were permitted to "test out" of a required activity course. No student was permitted to substitute more than two credits, however, under either option. The two primary reasons for the new policy was the existence of over-crowded classes and the department's desire to place more emphasis on leisure sports such as golf, bowling, and archery.¹

In 1957 the departmental offerings were categorized into eight comprehensive areas: courses primarily for undergraduate students, aquatics, team sports, combative individual recreational sports, leadership activities, co-educational

¹Iowa State Daily, 5 May 1956, p. 1.

activities, and the professional program. At the same time, a new major program, which provided an alternative to the major in physical education under the curriculum in sciences and humanities, was made available to men students. This professional program was designed to prepare men to teach a science as well as physical education, to coach athletics, or to direct recreational programs.¹ Requirements included subjects providing a broad cultural background, 45 to 60 credits in physical education, courses meeting requirements for professional teacher certification, supportive work in the major field, and courses toward the development of minor areas. Certification in each minor area required 23 credits.

In 1959 Gordon H. Chalmers succeeded Louis E. Menze who retired from administrative duties but remained on the teaching staff. Under Chalmers' leadership, the program in men's physical education grew rapidly. Three new courses in recreation were added to the department's curriculum in 1959 as well as courses in physical education program development and tests and measurements. Expansion continued with the addition of Human Relationships Aspects of Coaching in 1963 and An Introduction to Supervised Recreation in 1965.

By 1961 the undergraduate curriculum in physical education for men offered students three separate options upon graduation:

¹Iowa State College Catalogue, 1957-1959, p. 211.

teaching and coaching, journalism and broadcasting (in preparation for sports writing and sportscasting), and supervised recreation. While each of these options was based on a broad general background, 45-60 credits in physical education and 16 credits in animal biology and hygiene, additional courses were to be selected in accordance with each option. For example, teaching and coaching required completion of all core education professional courses, while the other two areas required only partial completion of these requirements. The teaching and coaching program also required completion of certification requirements in either two half-time or one full-time area of teaching in addition to physical education. Minor areas could be selected from agricultural sciences, driver education, English, industrial education, social studies, general science, or mathematics.¹ The only further change in the teaching and coaching option occurred in 1965 when the minimum number of credits to be taken in physical education was raised from 45 to 48.

Physical education for women

In 1941 Miss Winifred Tilden resigned as head of the Department of Women's Physical Education--a position which she had held since the department's establishment in 1924. During

¹Iowa State University Catalogue, 1961-1963, p. 193.

her final year, two new courses were added to the curriculum; one was an additional activities course, and the other dealt with principles of physical education. All undergraduate teacher preparation courses offered in women's physical education between 1941 and 1963 are listed in Table 26. The addition of these two courses set the tempo for the continued expansion of the department in succeeding decades and the addition of both minor and major programs for prospective teachers.

Miss Tilden was succeeded by Germaine Gladys Guiot, who served as department head until her retirement from administrative duties in 1958. A native of Boston, Massachusetts, Professor Guiot received her bachelor's and master's degrees in 1922 and 1933, respectively, from the University of Michigan. In 1940 she earned her education doctorate from New York University.

During Guiot's administration, courses for prospective teachers doubled from three in 1941-1942 to six in 1945-1946. Two courses related to the techniques of individual and team sports for high school girls were added in 1942. In 1945-1946 Professor Guiot began offering work in administration and supervision of physical education under Special Topics. After 1945 no further additions or deletions in teacher preparation courses occurred until after Guiot's retirement in 1958.

Table 26. Undergraduate teacher preparation courses in physical education for women from 1941-1963

No.	Course Name	Year		
		1941-42	1942-43	1943-44
326	Recreational Leadership	X	X	X
324	Physical Education	X	X	X
330	Principles of Physical Education	X	X	X
336	Methods and Materials in Individual and Team Sports*		X	X
338	Methods and Materials in Rhythmic Forms**		X	X
590	Special Topics			
161	Philosophy and Principles in Physical Education			
241,242,243	Physical Activities			
341,342,343	Physical Activities			
356	Community and Recreation Camping			
417	Supervised Teaching in Physical Education			
450	Organization and Administration of Physical Education			
452	Tests and Measurements in Physical Education			
121,122,123	Physical Education			
217	Officiating			

*Known as Technics of Individual Sports for High School Girls from 1942-1959; Methods and Materials in Sports and Gymnastics from 1959-1961.

**Known as Technics of Team Sports for High School Girls from 1942-1959; Techniques of Rhythms and Team Games for High School Girls from 1959-1961.

										X	X	X	X	X	1944-45
										X	X	X	X	X	1945-46
										X	X	X	X	X	1946-47
										X	X	X	X	X	1947-48
										X	X	X	X	X	1948-49
										X	X	X	X	X	1949-50
										X	X	X	X	X	1950-51
										X	X	X	X	X	1951-52
										X	X	X	X	X	1952-53
										X	X	X	X	X	1953-54
										X	X	X	X	X	1954-55
										X	X	X	X	X	1955-56
										X	X	X	X	X	1956-57
										X	X	X	X	X	1957-59
										X	X	X	X	X	1959-61
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1961-63

The addition of the aforementioned courses permitted the establishment of a teaching minor in physical education in 1946. Between 1946 and 1959 students were required to complete physical education courses in recreational leadership, principles of physical education, and techniques of team and individual sports in order to meet state certification requirements. Hygiene 104, Health Education, was also required. Beginning in 1949 the Catalogue stipulated that students had to complete the basic two-year physical activity program before taking the minor sequence. Also, in 1949, the hygiene requirement was dropped, and students were required to take either three credits of physiology or three credits of physical education activity from Physical Education 324. Additional changes in courses other than these in physical education occurred in later years as Hygiene 404, School Health Problems, Zoology, and special problems in vocational education were introduced into the program.

In 1958 Barbara E. Forker became head of the department and Germaine Guiot returned to teaching. Miss Forker had received her B.S. in 1942 from Eastern Michigan University, her M.S. from Iowa State College in 1950, and her Ph.D. from the University of Michigan in 1957. Under her leadership, the curriculum underwent rapid expansion and a major in physical education was established in 1959.

The major program was designed to prepare students for teaching physical education in the junior and senior high schools and colleges. A total of 45 credit hours were required to meet Iowa certification requirements for full-time teaching. Students interested in teaching physical education half-time or less were required to complete only thirty hours for certification. All the new courses added in 1959 were required for majors as well as those in recreational leadership and in techniques of team sports for girls. New courses encompassed the areas of activities, outdoor living, supervised teaching, organization and administration, and evaluation. Additional work was required in the related areas of hygiene, food and nutrition, and zoology. Two more courses were added to the required program for majors in 1961--Physical Education 121, 122, 123, which dealt with dance, team and individual sports, and Officiating, 217.

In 1963 the major program underwent almost total revision. Although much of the course content was unchanged, most major courses were retitled, renumbered, and grouped under "Professional Program Courses." The curriculum was now designed to prepare the student to teach all levels of physical education in the public schools. Table 27 lists all the undergraduate teacher preparation courses in physical education for women from 1963 to 1969.

Table 27. Undergraduate teacher preparation courses in physical education for women from 1963-1969

No.	Course Name	Year		
		1963-65	1965-67	1967-69
326	Recreational Leadership	X	X	X
356	Camping and Outdoor Education	X	X	X
150,151,152	Fundamentals of Physical Education Activities	<u>X*</u>	<u>X</u>	<u>X</u>
190	Introduction to Physical Education	<u>X</u>	<u>X</u>	<u>X</u>
250,251,252	Fundamentals of Physical Education Activities	<u>X</u>	<u>X</u>	<u>X</u>
265	Fundamentals of Modern Dance	<u>X</u>	<u>X</u>	<u>X</u>
270,271	Officiating	<u>X</u>	<u>X</u>	<u>X</u>
385	Techniques and Methods of Social, Folk, and Square Dance	<u>X</u>	<u>X</u>	<u>X</u>
390,391,392	Educational Bases of Physical Education	<u>X</u>	<u>X</u>	<u>X</u>
417	Supervised Teaching in Physical Education	<u>X</u>	<u>X</u>	<u>X</u>
452	Evaluation in Physical Education	<u>X</u>	<u>X</u>	<u>X</u>
470	Elementary School Physical Education	<u>X</u>	<u>X</u>	<u>X</u>
480	Scientific Bases of Physical Education**	<u>X</u>	<u>X</u>	<u>X</u>
495	Seminar in Physical Education	X	X	X

*X - Courses required for half-time teaching as well as full-time teaching to meet state certification requirements.

**Course No. 490 from 1963-1965.

Table 27 (Continued)

No.	Course Name	Year		
		1963-65	1965-67	1967-69
490	Special Problems***	X	X	X
590W	Special Topics (Administration and Supervision) of Physical Education)	X	X	X
310,311	Dance Production		X	X
386	Methods of Teaching Modern Dance		X	X
210,211,212	Composition, Concert Dance, Techniques		X	X
380	History and Philosophy of Dance		X	X
471	Elementary School Physical Education Teaching Methods			X
472	Creative Rhythmic Activities for Elementary School Children			X
473	Games and Activities for Elementary School Children			X

***Known as Course No. 499, Special Topics in Health, Physical Education and Recreation from 1963-1965.

In 1965 the major program was broadened still further in order to prepare students to teach dance or physical education in public schools and colleges. Four new courses in dance were added to the curriculum. These courses, as well as Physical Education 150, 151, 152, 250, 251, 252, 386, 390, 392, 490 (Special Topics in Dance), were required of students electing the dance option from 1965 to 1969.¹

In 1967 the department added three new courses in elementary physical education. Students desiring to receive kindergarten through twelfth grade certification in physical education were required to take creative Rhythmic Activities for Elementary School Children and Games for Elementary School Children in lieu of Elementary School Physical Education Teaching Methods in the major curriculum. Additional work in child development and music was also required.

Increasing interest in the department's programs can best be illustrated by the mounting number of major students between 1960 and 1970; during these years, majors numbered 27 and 215, respectively. In characterizing the growth of this department since 1900, Eppright and Ferguson noted that

since the time of Sadie Hook in the beginning of the twentieth century, when a few exercises were taught to students in the elecution department, the Department of Physical Education for Women has become an important area of

¹Iowa State College Catalogue 1965-1967, p. 186.

education and service not only to the students of Iowa State but to the State of Iowa.¹

Additional teacher education courses

Between 1941 and 1968 additional teacher preparation work continued in departments which had offered courses during the previous period (1917-1941). Work in the sciences and social studies became coordinated within the Division of Science, while English, mathematics, and botany remained within their respective departments. The music department again began to offer courses for prospective teachers. As a result of new federal and state appropriations and developments in technology and education, new teacher preparation courses appeared in modern languages, radio and television education, and speech.

Sciences and social studies At its inception in 1939 the Division of Science came under the direction of Harold V. Gaskill. Having come to Iowa State in 1930 as assistant professor in psychology, Gaskill was appointed Dean of the Division of Science in 1939. He held this position until 1955 when he left to become director of planning at Collins Radio in Cedar Rapids, Iowa.²

¹Eppright and Ferguson, p. 313.

²"Ames and Area Deaths," Ames Daily Tribune, 21 April 1975, p. 8.

The three teacher preparation courses--Directed Observation and Practice Teaching in the Sciences, Methods of Teaching Science, and Methods of Teaching Social Studies--which had been offered since 1939 continued to be offered without change for the next twenty years. In 1959 the Division of Science was renamed the College of Sciences and Humanities, and Richard S. Bear, who had succeeded Dean Gaskill as head of the Division of Science in 1955, continued as dean of the new college.

Within the Department of Science in the College of Sciences and Humanities, a new curriculum appeared--Distributed Studies in the Sciences and Humanities.¹ The same three teacher preparation courses, noted previously, were now offered under this new curriculum. Methods of Teaching Social Studies remained unchanged through 1967. Methods of Teaching Science also remained unchanged, with the exception that commencing in 1963 the course was designed for elementary as well as secondary teachers. Observation and Supervised Teaching in the Sciences was divided into nine specific subject areas and an additional area entitled supervised teaching. The subject areas included social studies, physical sciences, mathematics, biological sciences, English and literature, physical education for men, modern languages, physical education for women,

¹From 1961 to 1967 this program was known as the Curriculum in Science. In 1967 the title reverted back to Distributed Studies.

and art. The department also introduced a fourth teacher preparation course entitled Special Preparation in Subject Matter for High School Teachers. As with practice teaching, this course was divided into ten specific fields which included biology, chemistry, earth science, English, general science, history, mathematics, modern languages, physics, and social studies.

Dean Bear served the College of Sciences and Humanities until 1961 when John J. L. Hinrichsen was appointed Acting Dean for a two-year period. He was succeeded in 1963 by Chalmer J. Roy. Under Roy's leadership, the specific fields of study for both practice teaching and special preparation were broadened and made to correspond exactly with one another. In 1963 speech, journalism, and earth science were specified as additional fields of study. In 1967 music was added, and at this time, foreign languages replaced modern languages.

Between 1959, when the College of Sciences and Humanities was established, and 1969, three men were in charge of the teacher preparation in this college. John A. Greenlee was the Professor-in-Charge from 1959-1961. He was succeeded by Orlando C. Kreider who was appointed Chairman of the Teacher Education Committee in 1961. Kreider was succeeded by William R. Underhill in 1967.

English, mathematics, and botany Teacher preparation courses in English, mathematics, and botany continued to be

taught in their respective departments. No changes in course descriptions occurred in either The Teaching of English or The Teaching of Secondary School Mathematics between 1941 and 1968.

Botany 255, Field Botany, which emphasized the "materials, methods, aesthetics, and economics of plant life; for public school teaching,"¹ was offered until 1956-1957 when it became Botany 355. Major emphasis of the new course was on the "identification of common trees, shrubs and wildflowers . . . [and the] utilization of plant materials in secondary education."² In 1963, however, Field Botany 355 was dropped by the department.

Hygiene The Department of Hygiene offered only two courses related to the preparation of public school teachers between 1941 and 1949. These were Hygiene 104, Health Education (which became Health Education for Women in 1947), and Hygiene 404, School Health Problems. The latter course concentrated on "hygiene of [the] school, health of [the] school child and teacher, . . . , and the correlation of health education in the curriculum."³ By 1949 Hygiene 404 was the only remaining course which dealt with teacher preparation. It was offered continuously throughout the period, although it was renumbered Hygiene 304 in 1965.

¹Iowa State College Catalogue, 1949-1950, p. 181.

²Iowa State College Catalogue, 1957-1959, p. 134.

³Iowa State College Catalogue, 1946-1947, p. 239.

Until 1965 the hygiene department was under the direction of John Gray Grant, M.D. Although the primary purpose of the department's instructional program was to conserve, improve, and maintain the health of Iowa State students, the department also offered course work relevant to the preparation of teachers. In 1965 Dr. Gail M. Proffitt replaced the retiring John G. Grant as department head. The department's instructional policy was unchanged.

Modern languages Prior to 1959 the Department of Modern Languages had not offered any course which was germane to the preparation of secondary school language teachers. By 1952, however, the department had noted that prospective teachers might find a major in one of the modern languages useful.

Expansion of the modern language curriculum to include course work for prospective teachers was stimulated by the National Defense Education Act of 1958. The curriculum for prospective teachers was developed under the direction of Alfred P. Kehlenbeck, who was head of the department between 1959 and 1969. In 1959 the department introduced Modern Languages 476, Methods of Teaching Modern Languages. Prospective teachers were also required to take Science 417, Directed Observation and Supervised Teaching in the Sciences, which was offered by the College of Sciences and Humanities.

In 1961 the department began to offer a regular academic major. Students who planned to teach in Iowa's public schools were required to complete the professional teacher education course sequence, Modern Languages 476 and Science 417. In addition, the department recommended a program of four years in one language, two years in a second language, and course work concentrated in an outside field, such as English or mathematics. No further significant changes occurred in the program, but the department was renamed the Department of Foreign Languages in 1967.

Music In 1963, under the leadership of Lawrence E. Hart, the music department again began to offer course work for prospective teachers. Four new courses were added to the department's offerings: Creative Activities in Music, which emphasized experiences with instruments and music for small children,¹ Music in the Elementary Schools and Music in the Secondary Schools, both of which stressed methods and materials, and a special topics course in music education.

In 1967 N. Laurence Burkhalter replaced Lawrence Hart as head of the department. The initiation of a major in music this same year had been arranged on the recommendation of Hart, who had requested in March, 1966, that a major in music be added to the curriculum in 1967. (Hart had pointed out

¹Iowa State University Catalogue, 1963-1965, p. 332.

that Iowa State was the only one of the twenty land-grant colleges which did not offer a major in music.¹⁾ The new major provided two separate options--one for prospective teachers and another for those not interested in teaching. Option I, Music Education, was designed for students desiring to teach vocal or instrumental music in elementary and secondary schools. In addition to those courses which had been introduced, four new teacher preparation courses were added to the curriculum in 1967--History and Philosophy of Music Education, Practicum in String Instruments, Practicum in Woodwind Instruments, and Practicum in Brass and Percussion. Students preparing to teach were required to complete two of the three practicum courses. Music education students were also required to complete Science 417.

Radio and television education While Iowa State College had begun broadcasting radio programs as early as 1922, no specialized teacher preparation courses were offered until 1946. At this time Broadcasting For School Use was introduced in the vocational education department. This course was designed to prepare teachers to use and instruct radio materials in the classroom and in other education-related activities. In the same year, radio education was added to the vocational education special topics sequence.

¹Iowa State Daily, 19 March 1966, p. 1.

In 1950, WOI-TV was completed and Iowa State College earned the distinction of becoming the first educational institution in the United States to operate its own television station. In 1952 Joseph H. North was designated Coordinator of Radio and Television Education, and Broadcasting For School Use was dropped. In 1954 the course in radio education was also dropped from the vocational education curriculum, but in the following year, Classroom Utilization of Audio-Visual Aids, including Radio and TV, was offered under special topics in Vocational Education. It remained under special topics through 1968.

Speech The first two courses to prepare students for teaching speech were offered by the Department of English and Speech in 1959. Speech Correction Principles focused on various speech disorders commonly found in school age children and stressed contemporary remedial work which could be utilized by classroom teachers. The second course was Speech Education, which was a part of Speech 499, Special Problems. In 1963 these two courses were complemented by the addition of The Teaching of Speech, which stressed problems materials and methods which were directly related to teaching speech in the secondary schools. The development of teacher preparation work in speech was directly related to the expansion of special education in Iowa during the 1950s and the 1960s.

Summer school

During the period between 1941 and 1968, although the summer school continued to offer courses required for state teacher certification, the program was increasingly directed toward meeting the needs of graduates and advanced undergraduates. Summer courses in psychology and education were designed to meet the needs of students seeking advanced degrees in either school administration or fields such as industrial education, adult education, guidance and counseling, general agriculture, and general home economics.

During the war years the summer school accelerated its academic program as part of its contribution to the war effort. Students could take advantage of this opportunity by entering college during any quarter they chose, pursuing the curriculum of their choice, and graduating thirty-six months later.¹ This accelerated program necessitated an "unusually large number of required and elective courses,"² which were provided as a result of wartime demands.

From 1942 to 1946 the child development department not only offered special programs for women students who were faced with the problem of organizing nursery schools for the children of working mothers, but it also apparently conducted

¹Iowa State Summer School Catalogue, 1945, p. 3.

²Ibid.

its own nursery school for the children of teaching mothers who returned to college over the summer to pursue advanced courses.

During the fifties and the sixties, summer work at Iowa State included graduate work in newer fields such as audio-visual education and driver education. Workshops began to be conducted in almost all teacher preparation areas for both in-service and prospective teachers. A special curriculum in industrial science, under the direction of Lowell Carver, offered a unique four-week experience for industrial arts teachers in the building trades. Specifically, this program carried on in cooperation with various Ames, Iowa, building contractors, allowed the teachers to obtain on-site instruction in carpentry, cement work, masonry, etc.

In summation, the number of students seeking advanced courses at Iowa State continued to rise, while the number of undergraduate students declined. After 1941, therefore, summer work at the college was primarily directed toward in-service as opposed to prospective teachers.

Teacher certification and Iowa State College

Teacher certification requirements at Iowa State College remained unchanged from 1939 to 1950. During these years, 22 1/2 credits were to be completed in the major area of concentration and a minimum of 15 credits in each of two minor fields. Furthermore, three credits in the principles of

American government and 22 1/2 credits of professional subjects were required. The 22 1/2 credits in professional subjects were to be distributed as follows: 9 credits in psychology; 4 1/2 credits in an introduction to, history of, or principles of education; 4 1/2 credits in teaching methods; and 4 1/2 credits in supervised teaching.

The early 1950s witnessed several certification changes. In 1951 the department of public instruction introduced an alternative method of certification for prospective teachers. Under the new plan, 30 credits were required in a major area of concentration and 22 1/2 credits in one minor field.¹ In 1952 the required number of credits in professional education was reduced by 2 1/2 credits, and the distribution of credits was changed. The new plan was as follows: 9 credits (six semester hours) in methods of teaching and evaluating pupil progress; 7 1/2 credits (five semester hours) in student teaching; and the inclusion of additional professional education courses required of all those seeking certification.²

The year 1953 witnessed another change. In order to receive the Iowa Standard Secondary Certificate, the candidate had to complete at least 30 credits in one field with an additional 22 1/2 credits in two other separate academic areas

¹Iowa State College Catalogue, 1951-1952, p. 317.

²Iowa State College Catalogue, 1952-1953, p. 321.

or complete 45 credits (30 semester hours) in one subject field and 30 credits (20 semester hours) in one additional field. The remaining requirements (as revised in 1952) remained unchanged.¹

In 1954 still another change took place. Beginning in this year, "candidates for certificates to teach must take V. Ed. 305 for four credits unless they elect V. Ed. 550."² Vocational Education 305, Methods of Teaching, included the study of the American school system, past and present, the modern objectives of education, and education in a democracy.³ Vocational Education 550, Audio Visual Methods in Education, emphasized the selection and preparation of various material for classroom use. In 1957, however, the media component was added to V. Ed. 305 and it became a required professional education course. This meant that it was no longer necessary to elect V. Ed. 550.

In 1955, following the reorganization of the department of public instruction, the Iowa Standard Secondary Certificate became known as the Iowa Professional Certificate. Likewise, the Advanced Secondary Certificate became known as the Permanent Professional Certificate.

¹Iowa State College Catalogue, 1953-1954, p. 330.

²Iowa State College Catalogue, 1954-1955, p. 347.

³Ibid., p. 348.

Certification requirements at Iowa State changed again in 1959. At this time the specific credit hour options were deleted and the following revised requirements were instituted for acquisition of the Iowa Professional Certificate. First of all, the prospective teacher had to complete all requirements of the teacher education program.¹ In addition, the student was required to take 60 credits in "courses designed to serve the general needs of college students," 45 credits in subject matter concentration for full-time teaching, and a second subject matter area of at least 30 credits for less than half-time teaching.² These same requirements held through 1964. The only additional inclusion which occurred was the incorporation of the Child Development-Elementary Education endorsement, which could be achieved by completing the prescribed curriculum in that subject area.

In 1965 the minimum number of credits in courses "designed to meet the general needs of college students" was increased from 60 to 75 credits. The course in American government was to be included in this total. All other requirements remained unchanged through 1968.

¹The courses in this program included: General Psychology 104; Developmental Psychology 234; Educational Psychology 334; Principles of Education 204; Methods of Teaching 305; Principles of Secondary Education 426; American Government 215; Special Methods Course; and Student Teaching.

²Iowa State University Catalogue, 1959-1961, pp. 249-250.

Teacher education committee Although Barton Morgan served as the Director of Teacher Education as well as head of the vocational education department, there was no one uniform standing committee on teacher education to act as both a coordinating and a policy making body. Some attempts were made, however, to unify more closely the goals and objectives of the diverse teacher education programs and courses under Morgan's direction.¹

It was not until November, 1950, that a coordinating body with this specific mission would come into existence. Its genesis was prompted primarily by the Iowa State Department of Public Instruction through its efforts to move toward a more uniform state-wide teacher certification program with higher standards for teacher preparation programs requirements and, therefore, higher standards for teacher certification.²

The Iowa State Department of Public Instruction, through its designated agency the board of educational examiners, undertook the task of upgrading teacher education programs in all of Iowa's institutions of higher learning. In order to accomplish this, the board requested each institution to establish a special committee to coordinate the various teacher education programs among the departments offering such programs

¹Interview with Morgan.

²Interview with Bryan, 16 May 1975.

or courses.¹ In accordance with the guidelines set forth by the board, each committee was charged with the task of establishing a "framework" through which these coordinating efforts could take place.²

On November 1, 1950, President Charles E. Friley, in direct response to the request of Mr. Wayland Osborn, secretary of the board of educational examiners, asked Professor Ray Bryan to recommend the names of members of the administration and faculty" who would make good committee members and who were interested in teacher education."³ In less than three weeks, the following persons were appointed to serve as members of the newly formed Teacher Education Committee: Florence Fallgatter, Home Economics Education; Clarence Bundy, Agricultural Education; Lowell Carver, Industrial Education; John A. Greenlee, Division of Science; Dean R. M. Hixon, Graduate Division; John W. Litherland, Teacher Placement; W. A. Owen, Psychology; Barton Morgan, General Vocational Education; and Ray J. Bryan, Chairman of the Committee.⁴

¹Ibid.

²Ibid.

³President Charles E. Friley to Ray J. Bryan, 1 November 1950, President C. E. Friley Correspondence, Series No. 2/9/3, Box. No. 1, Iowa State University Special Collections, Ames, Iowa.

⁴President Charles E. Friley to the newly appointed members of the Teacher Education Committee, President Charles E. Friley Correspondence.

This university committee on teacher education was unique in that it was composed of a representative of each department or division that was in any way connected with teacher education at Iowa State College. This university-wide representation was crucial to the committee's successful endeavors. While many professional colleagues on campus understood the responsibility and mission of teacher education and, in general, the vocational education department, there were still others throughout the college that neither understood nor sympathized with the mission of the vocational education department.¹

Through university-wide representation of those connected with teacher preparation, Professor Bryan hoped to minimize the lack of understanding and maximize the effort in coordinating the multiple teacher education programs into a more unified whole.² Perhaps, according to Ray Bryan, one of his most significant accomplishments in 1950 was his appointment of John Litherland as Director of Teacher Education for the Division of Science. For the first time, the Division of Science had an administrative coordinator for its many teacher education programs.

¹Interview with Bryan, 25 March 1975.

²Ibid.

The Teacher Education Committee, realizing that approximately one out of every five students who received bachelor's degrees from Iowa State entered the teaching profession, subsequently recommended that prospective teachers be required to have a strong subject matter background comprising 44 to 46 quarter hours in their major area of concentration coupled with a well-rounded core of professional teacher education courses from the departments of both vocational education and psychology.¹ The selection of students, the teaching of special methods courses, and the supervision of student teachers were to be directed by individual departments. In addition, each department was directed to compile a list of courses which would adequately prepare the student to teach in that field and submit this to the Teacher Education Committee for final approval. The coordination of these various departmental activities was the responsibility of the Teacher Education Committee.²

By 1958 formal admissions provisions for entrance into the teacher education program at Iowa State were enacted by the Teacher Education Committee. First, the student was required to submit a formal application to a selection committee within his department of academic specialization. Successful

¹Ibid.

²Ibid.

candidates would then have their dossiers reviewed by the Teacher Education Committee for final action. Criteria for acceptance into the teacher education program included scholarship, health, character, and evidence of the student's desire to make teaching his life's vocation. Of these, however, scholarship was considered perhaps the most important criterion. A cumulative grade point average of at least 2.3 at the close of the sophomore year was required of all prospective teachers. The reason the committee selected a 2.3 cumulative grade point average was the fact that a study of several freshman and sophomore classes had shown that this figure represented the median. It was the committee's belief that all students pursuing a teaching career should be in the top half of their class academically.¹

While the establishment of these criteria by the Teacher Education Committee was in direct response to the efforts of the department of public instruction to develop higher certification standards, it must also be noted that Iowa was rapidly moving toward adopting the standards of the National Council for the Accreditation of Teacher Education. By incorporating NCATE standards for teacher certification, the department of public instruction ultimately forced each institution of higher education in Iowa to become a member of

¹Ibid.

this national teacher education accrediting agency.¹

In 1959, upon the recommendation of the Teacher Education Committee, an Administrative Committee on Teacher Education was established.² The responsibilities of the new committee were basically those of the former Teacher Education Committee. The only difference, according to Ray Bryan, was that the latter more closely supervised and administered the policy enacted by the committee itself.³ Membership of this committee was composed of the heads or chairmen of the departments of vocational education, home economics education, psychology, and the professor-in-charge of secondary teacher preparation in the Division of Science.⁴ John Litherland was appointed secretary of the committee and W. Robert Parks, Dean of Instruction, was made an ex-officio member. The chairmanship was on an annual rotating basis, with Ray Bryan serving as the first chairman.

By 1960 the vocational education faculty decided that it would be advantageous to both faculty and students to become accredited by NCATE.⁵ With the approval of the Department of

¹Interview with Bryan, 27 May 1975.

²Iowa State Faculty Newsletter, 13 March 1959, p. 1.

³Interview with Bryan, 27 May 1975.

⁴Iowa State Faculty Newsletter, 13 March 1959, p. 1.

⁵Interview with Bryan, 27 May 1975.

Vocational Education, Professor Ray Bryan proposed to Iowa State President James H. Hilton that the University seek membership in NCATE. On March 27, 1960, the NCATE visitation team arrived on campus to inspect the University's physical facilities and to evaluate its teacher preparation programs.

The results of the initial visitation were less than satisfying. A written report to James H. Hilton dated September 15, 1960, from W. Earl Armstrong, Director of NCATE, informed the University that

the Council [NCATE] at its meeting on August 11-12, 1960, granted provisional accreditation to Iowa State University for the preparation of elementary and secondary teachers with the Bachelor's degree as the highest degree approved.¹

It is interesting to note that at the time this report was issued Iowa State did not have a program designed to prepare teachers in elementary education. What the University did have was a major in child development, which was administered by the Division of Home Economics and which was designed to prepare teachers for nursery school or kindergarten teaching.

Contained within the NCATE report were a number of direct criticisms of the teacher education program at Iowa State. Primarily for the following reasons, Iowa State was offered

¹Lagomarcino to Weller, 12 May 1975. Private communication excerpting material from W. Earl Armstrong (NCATE) to James H. Hilton, 15 September 1960.

provisional status which, however, was rejected by President Hilton.

1. The Council is not convinced that adequate machinery for policy making, program planning and program evaluation now exists. There is no centralized authority for such responsibilities as employment of staff, promotion, program development, selection of students, and leadership. The Administrative Committee might perform such functions as the establishment of policy and standards for admission to teacher education and the establishment of policy and plans for student teaching, but the other functions will have to depend upon some individual with recognized authority to perform.
2. The program of general education for prospective teachers ranges from 62 to 105 quarter hours. An effort should be made to develop what the University regards as an adequate program of general education for persons preparing to teach and some degree of consistency developed from one department to another in this regard.
3. The programs of professional laboratory experiences including student teaching are so diverse as to make it impossible to judge what the University regards as an adequate program of student teaching and other laboratory experiences for prospective teachers. There are variations from department to department in the amount of time spent in laboratory experiences including student teaching, in the fees paid to schools for servicing student teachers, in arrangements for bringing the supervising teachers into partnership with the institution, and in the amount and kind of supervision provided for student teaching. Some arrangement needs to be made for coordinating this program so that at least some degree of internal consistency can be provided.

4. Faculty offices for professional education, classrooms, and laboratories are so scattered throughout the campus as to make it next to impossible to integrate and coordinate the program of professional education.¹

Following NCATE's criticisms, a new position was established at Iowa State--Director of Teacher Education. In creating this position, the University provided an immediate solution to the need for "one individual with recognized authority." The need for stability in leadership and coordination, as well as for executing established standards and policies of the Administrative Committee on Teacher Education were the reasons for the establishment of the directorship.²

On March 1, 1961, Virgil S. Lagomarcino was appointed Director of Teacher Education at Iowa State University. Professor Lagomarcino was well prepared for this responsible position. Born in Plainfield, Iowa, on March 23, 1921, he had received his B.A. from Coe College in 1943, his M.S. from Drake University in 1948, and the Ph.D. from Iowa State University in 1955. After teaching school in Vinton, Iowa, he served as superintendent of schools at Keystone, Iowa from 1945 to 1949 and then at Anamosa, Iowa, from 1949 to 1951. Until he joined the Iowa State faculty in 1955, Professor

¹Ibid.

²Interview with Bryan, 27 May 1975.

Lagomarcino served as a regional consultant to the Iowa Department of Public Instruction and Director of Curriculum and Supervision as well as Director of Public Junior Colleges for the Department of Public Instruction.¹

As the Director of Teacher Education at Iowa State, Lagomarcino was

responsible for leadership and coordination of the teacher education program in the Colleges of Agriculture, Home Economics, and Sciences and Humanities; certification and placement of teachers trained at Iowa State; the planning and evaluation of the teacher education curricula, and coordination of the various aspects of the program for student teaching.²

He was directly responsible to the Vice President for Academic Affairs, W. Robert Parks, and served as Chairman of the Administrative Committee on Teacher Education. Other members of this committee at this time were: Ray Bryan, head of the vocational education department; Orlando C. Kreider, professor-in-charge of secondary teacher preparation for the College of Sciences and Humanities; Wilbur L. Layton, head of the psychology department; John W. Litherland, professor of vocational education and director of the teacher placement office, who was the committee's secretary; and, M. Marguerite

¹Vita of Virgil S. Lagomarcino, June, 1974.

²News of Iowa State, July, 1962, p. 3.

Scruggs, head of the home economics education department.¹

It is important to point out, however, that the duties of the director were not exactly akin to those of dean of a college. This essentially meant that he had

the leadership responsibilities but had no identifiable budgeted faculty. In essence, the Director of Teacher Education was like a minister without a portfolio.²

Although the major responsibility of the committee was to establish policy, it also

. . . officially admits students to the teacher education program after they have been recommended by their department; approves the substitution of courses in a student's program; coordinates dates for student teaching; develops standards for a certain subject; approves new programs for departments to institute; and, approves course requirements in the teaching field.³

While these responsibilities were similar to those of the original Teacher Education Committee, which existed prior to 1959, the major emphasis of the original committee was more on coordinating than on establishing and administering policy.

The second criticism of NCATE which was leveled against Iowa State was related to credits in general education which were required of prospective teachers by the various teacher

¹University Report, 23 March 1962, p. 148, File: History, 1-16, Class No. AA-13, Box No. 1, Iowa State University Special Collections, Ames, Iowa.

²Interview with Lagomarcino, 9 April 1975.

³University Report, 23 March 1962, p. 149.

education departments. While it is true that a wide variance among departments existed, it was also true that the required number of credit hours in general education, in all cases, exceeded the minimums established by NCATE. According to Ray Bryan, NCATE's minimum was set at 60 hours for general education, and at Iowa State the Departments of Vocational Education, Agricultural Education, and Home Economics Education all required a minimum of 68 quarter hours. The College of Sciences and Humanities required an even greater number.¹ As a result of this criticism, however, the teacher education committee stabilized the number of quarter hours in general education required of all prospective teachers at approximately 75. These credits encompassed such areas as communications skills, the natural and physical sciences, and physical education.²

NCATE's criticism of Iowa State's variances in the amount of time required by different departments for student teaching and the apparent lack of stability within departmental "laboratory experiences" was, according to Ray Bryan, inaccurate. Not only did Iowa State once again exceed minimum NCATE requirements, but consistency also existed with regard to laboratory experience requirements. Nine to twelve quarter

¹Interview with Bryan, 27 May 1975.

²Ibid.

hours were required for student teaching as well as a pre-student teaching experience in areas such as agricultural education, home economics education, and the sciences and humanities. This latter program required students to begin their practicum during the first two or three weeks of the academic year in the school where they would complete their student teaching. The purpose of this extra exposure was to familiarize students with some of the general experiences which they would later be required to handle.¹

The apparent disparity in the areas of fee payments and the amount of supervision provided by the supervising teacher was minimized when Iowa State explained to NCATE officials that arrangements through various student teaching centers throughout the state provided consistency with respect to fee payments made to the supervising teacher and his affiliation with the University. Each community and each department worked together in establishing those procedures and policies which were mutually beneficial within each student teaching center.²

The fourth and final criticism noted in the NCATE report was the lack of a structure to house an integrated and coordinated program of professional education. Classrooms,

¹Ibid.

²Ibid.

laboratories, and faculty offices were, in fact, scattered throughout the campus. Despite the establishment of a College of Education in 1968, however, no new education complex was built, and these facilities continued to be located in various buildings throughout the campus.

The NCATE report had also concluded that teacher education was too important a mission to be entrusted to an institution which did not make such a program one of its central purposes. According to an NCATE official, this was essentially a weakness in organizational structure.¹ A permanent stabilizing structure was needed to introduce consistency with respect to program development and increasing enrollment in teacher education. One indication of the growing importance of the teacher education program was the increasing number of graduates who received teacher certification. The figures for 1962 and 1967 respectively were 214 and 427; estimates for 1970 approached 2,400 students.²

By 1967 the need for the establishment of a College of Education was very evident. The establishment of a separate college for education was totally in keeping with President W. Robert Parks's philosophy of "a broad based university with

¹Ibid.

²Iowa State Daily, 17 December 1970, p. 1.

an orientation around science and technology."¹ In his September convocation address, President W. Robert Parks stated that

. . . we now should build out of these specialty teaching areas a College of Education whose educational programs will be stronger and more relevant because they will be highly interdisciplinary, with strong foundations in subject matter areas.²

Parks further emphasized the fact that the new college would not develop new programs but rather combine programs that were already being offered.

In 1968 some 2,000 students were enrolled in one of the many undergraduate programs of teacher education at Iowa State. Both the administration and the faculty of the Department of Education noted the increasing demand for teachers in Iowa and throughout the nation and in a formal statement gave support to the establishment of a College of Education.

It is considered essential that the University adopt an administrative structure and procedure which will provide for the constant growth and development in the quality of teacher education. The establishment of a College of Education is most desirable in an institution which attempts

¹W. Robert Parks, Our Usable Past, The Iowa State Alumnus 59 (October 1963): 5, College History Committee Collection, Class No. AJ-2, Box No. 1, Iowa State University Special Collections, Ames, Iowa.

²Iowa State Faculty Newsletter, 8 September 1967, p. 1.

to bring together disciplines in sciences, technologies, and humanities in a common concern for the human and the humane.¹

In addition to the nearly 50 percent increase in the number of students who were recommended for teacher certification between 1962 and 1967, the increasing demand for teacher education was also reflected in enrollment rises in specific areas.

The number of areas in which more than ten teachers were recommended for certification increased from four in 1959-1960 to twelve in 1966-1971. The areas in which more than twenty teachers were prepared increased from four to ten during the same period.²

While these figures were impressive, of even greater importance was the movement toward a more diversified teacher education program.

In 1959-60, approximately 79 percent of all teachers were prepared to teach vocational home economics, vocational agriculture, industrial arts, or mathematics. Approximately 21 percent were prepared in art, English, modern languages, physical education, science and social studies. Currently, approximately 36 percent are being prepared in vocational home economics, vocational agriculture, industrial arts and mathematics; and approximately 64 percent are being prepared in other areas. In recent years the number of areas in which graduates were

¹Statement in Support of Iowa State University's Request for Authorization to Establish a College of Education, May 9-10, 1968, p. 3, furnished to the author by Virgil S. Lagomarcino.

²Ibid.

recommended for certification increased from fifteen to twenty-four--approximately 60 percent.¹

Constantly increasing enrollments, the proliferation of new teacher education programs and courses, the growing need for a centralized authority to administer the total program, the desire for accreditation by NCATE, and the broad based university philosophy of President W. Robert Parks, constituted factors which, working in concert, had produced a need for the establishment of a College of Education at Iowa State University. The University received the unanimous approval of the Iowa State Board of Regents, and on September 1, 1968, the new College of Education was officially opened.

Summary

The atomic ending of World War II in 1945 thrust America into a position of world leadership--a leadership, however, which was to be challenged by the philosophies and forces of communism. While industrial and technological advances continued, social and economic inequalities became major domestic concerns. The growth of government and governmental power continued, and Americans increasingly voiced acceptance of this fact. Federal support for vocation education continued to expand, and passage of the National Defense Education Act

¹Ibid.

of 1958 signified the beginning of federal programs for non-vocational subjects.

School enrollments showed increases on all levels, and curricula reflected new offerings. Elementary programs stressed purposeful activities designed to enhance the development of the whole child. Although educators adopted opposing views with respect to the purpose of secondary education, the comprehensive high school remained the typical secondary institution, and the emphasis on correlated or broad-field course continued. Enrollments in both junior colleges and four-year institutions also rose rapidly as a college education came to be considered essential to success in life.

By the middle of the twentieth century, teachers colleges had almost completely replaced state normal schools. Teacher preparation programs continued to reflect higher standards, and collegiate-level programs began to be developed for elementary as well as secondary school teachers. The continued expansion of summer schools and correspondence programs offered further opportunities for increased professionalization.

In Iowa both elementary and secondary enrollments rose and educational developments were largely shaped by new state and federal legislation which provided additional appropriations for a variety of purposes. Improvement of instruction and the addition of more specialized services characterized

much of the school program. Vocational education programs, supplemented by war training programs, continued to expand. The passage of NDEA in 1958 focused attention on nonvocational subjects. Of particular interest, however, was the addition of provisions for audio-visual services, special education, guidance, and safety and driver education.

School district reorganization, approved by the state legislature in 1953, resulted in a new round of school mergers. The number of school districts declined rapidly, as community school districts became the newer and more efficient units of public education. Reorganization was also characteristic of the junior colleges where enrollments were also rising. Under state legislation of 1967, fifteen of Iowa's sixteen junior colleges were designated as either area community colleges or area vocational schools.

In 1950 still another report was issued on the relationships among the three state institutions of higher education. The Strayer report questioned the appropriateness of the term "vocational education" with reference to teacher preparation in the sciences at Iowa State College. Although the report raised some valid questions, it basically sanctioned the majority of existing teacher preparation programs at all three institutions, but recommended that they be subject to continuous study and evaluation.

With respect to teacher preparation and certification, the major focus of this period was on the upgrading of requirements for certification. Institutions of higher learning, including the public junior colleges, enlarged their programs for prospective teachers and developed new ones as demands for them arose. State legislation of 1953 created a new state board of education, abolished the board of educational examiners, and transferred authority for certification to the state department of public instruction. In 1954 a new classification for certification was approved which required endorsement for specific types of teaching or administrative responsibilities.

At Iowa State College, enrollment in teacher education programs continued to rise. Existing programs in psychology and various fields of vocational education and home economics remained strong while new major and/or minor programs or options were added in safety and driver education, art education, elementary education, and physical education. The Department of Vocational Education, which in 1962 became known as the Department of Education, continued to administer the vast majority of these diverse programs. Additional courses for prospective teachers continued to be offered in the sciences, social studies, English, mathematics, hygiene and speech, and new programs appeared in foreign languages, music, radio and television education. Teacher certification

requirements at Iowa State were updated in light of changes initiated at the state level and, in general, exceeded those set forth by NCATE. The summer school continued to offer courses which met requirements for state teacher certification, but the over-all program was increasingly directed toward graduate and advanced undergraduate students.

Efforts to more closely coordinate these diverse teacher education programs were reflected in the 1950 establishment of the Teacher Education Committee, which boasted university-wide representation. This committee was succeeded in 1959 by an Administrative Committee on Teacher Education, which had additional authority with respect to supervision and administration of committee policies. Both these attempts, however, failed to place ultimate responsibility for teacher education in "one individual with recognized authority," as the 1960 NCATE report noted. The appointment of a Director of Teacher Education in 1961 still failed to provide the desired solution. In light of increasing enrollments, diversification of programs, criticisms outlined in the NCATE report, it became increasingly evident to members of both the administration and the faculty that a separate college of education was both necessary and desirable as well as in keeping with the broad-based university philosophy of President Parks. A College of Education was finally established at Iowa State University on September 1, 1968.

The following time line summarizes major events in teacher education on the national scene, in Iowa, and at Iowa State University from 1941 to 1968.

MAJOR EVENTS - TEACHER EDUCATION

TIME LINE
1941 - 1968

<u>National</u>	<u>Iowa</u>		<u>Iowa State University</u>
Pearl Harbor (December 7)		1941	General vocational education
		1942	
		1943	
Serviceman's Readjustment Act		1944	
World War II ends	Supplemental Aid Act Agricultural Land Tax Credit Act	1945	
George-Barden Act		1946	Teaching minor in physical education (women)
	Last junior college established	1947	
		1948	
		1949	
	Strayer report Division of Special Education Established state department of public instruction	1950	Teacher Education Committee Director of Teacher Education for Division of Science appointed WOI-TV completed
		1951	Major in physical education with two minors (men)
		1952	

Time Line 1941 - 1968 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa State University</u>
	End of consolidation - 1953 established community school districts Department of public instruction reorganized	
Brown vs. Board of Education	New certificate classification	1954
	Iowa State Board of Education becomes the State Board of Regents	1955
		1956
Sputnik I		1957
		Psychology department adds course sequence in driver education and safety New major curriculum in physical education (men) Major in physical education high school (women)
National Defense Education Act		1958
		1959
		Home management houses end Administration Committee on Teacher Education replaces Teacher Education Committee Major in women's physical education Name changed to Iowa State University Divisions renamed colleges
		1960
		NCATE visitation and report

Time Line 1941 - 1968 (Continued)

<u>National</u>	<u>Iowa</u>	<u>Iowa State University</u>
		1961 Major in modern languages Director of Teacher Education appointed
	Staff consultant in A-V services and educational TV added to Department of Public Instruction	1962 Major in child development - elementary education Department of Vocational Education becomes Department of Education
Vocational Education Act	"Future Goals for Public Schools in Iowa" (Iowa State Board of Education Policy Statement)	1963 Major in art education Major in physical education (K-12)--women
Civil Rights Act		1964
Elementary and Secondary Education Act		1965 Dance option added to major in physical education (women)
	Driver education required in all public school districts	1966
	Junior colleges renamed area community colleges or area vocational schools	1967 President Parks calls for College of Education Media Resources Center Major in music education
		1968 College of Education established September 1, 1968

CHAPTER VII

EPILOGUE: THE COLLEGE OF EDUCATION

The College of Education, which officially opened on September 1, 1968, was the first major addition to the University since 1913 when the Division of Home Economics and the Graduate Division was established.¹ The founding of the College of Education, according to George C. Christenson Vice President for Academic Affairs, would

. . . permit the University to adopt an administrative structure and procedure which will provide for constant growth and development in the quality of teacher education; organization and administrative problems will be a centralization of responsibility for the program with a higher degree of communication and coordination.

University officials and the Regents felt that with the new College, Iowa State would be in a better position to meet its established commitments to professional education and to provide a more efficient vehicle for future development.²

Virgil S. Lagomarcino, who had been director of teacher education at Iowa State since 1961, was named acting dean of the new college.³ Lagomarcino also continued to serve as the director of teacher education until November 1, 1968, when he

¹All divisions were renamed colleges in 1959 when Iowa State College became Iowa State University.

²News of Iowa State, July - August 1968, p. 1.

³A temporary measure to allow time for the Board of Regent's formal appointment.

was officially appointed Dean of the College of Education.

Lagomarcino was

. . . appointed with administrative and coordinating responsibilities for the following areas: (1) teacher education services (noninstructional);¹ (2) elementary education; (3) secondary education; (4) student teaching; and, (5) professional studies.²

The Dean was authorized to appoint a cabinet composed of representatives from departments which were involved in teacher education; these persons would then serve in an advisory capacity with respect to the establishment of policy.

Faculty appointments in the College of Education were of two basic types--full appointment or joint appointment.³ Full

¹Teacher education services included administrative activities related to admissions, certification and approvals, teacher placement services, and the Instructional Resources Center.

²Iowa State University, Statement in Support of Iowa State University's Request for Authorization to Establish a College of Education, 29 April 1968, pp. 11-12.

³As of September 1, 1968, full appointments were held by six professors, seven associate professors, seventeen assistant professors, and ten instructors. Joint appointments with the College of Agriculture included four professors, two associate professors, four assistant professors, and one instructor. Joint appointments with the College of Home Economics included three professors, one associate professor, five assistant professors, and four instructors. Joint appointments with the College of the Sciences and Humanities included four professors and four assistant professors. Prior to the establishment of the College of Education, the Department of Education included seven professors, five associate professors, eighteen assistant professors, and eight instructors.

appointments were offered to faculty holding full appointments in the Department of Education and to faculty in safety education. The majority of the faculty received joint appointments including: faculty holding full appointments in the College of Agriculture; faculty in the College of Sciences and Humanities who supervised student teachers and taught special methods courses; faculty in the Department of Psychology who taught courses in the professional education sequence; faculty in the Department of Home Economics Education; and faculty in the Departments of Applied Art and Physical Education for Women who supervised student teachers or taught special methods courses. Full or joint appointments in the College of Education, as appropriate, were offered to faculty who taught, supervised, or advised in the elementary teacher education program and faculty in the Department of Physical Education for Men. Through the establishment of the joint appointment system an important "linkage" was established with faculty members in academic areas other than education. This joint appointment practice served as a vehicle for communication and coordination and united the various departments and colleges engaged in teacher education with the College of Education.¹

The majority of prospective teachers were not classified in the College of Education, although the college did maintain

¹Interview with Lagomarcino, 9 April 1975.

appropriate records and did provide services for them. Only students in either elementary education or industrial education were classified in the College of Education. All secondary education students were classified in the particular college of the University which administered their major area of study. This organization constituted an over-all strength of the College of Education. By keeping students close to their major departments, students would reap the benefits of "having a strong grounding in their subject matter area."¹

Within the College of Education major-interest areas were established. The elementary education section was

. . . responsible for the development and implementation of the teacher preparation program leading to certification and approval of elementary school teachers. These responsibilities would include curriculum development, admission, and instruction in the elementary professional sequence.²

Jess R. Beard was appointed to administer and coordinate the activities of the elementary education section.

The secondary education section was primarily responsible for the development, implementation, and coordination of experiences leading to approval and certification at the secondary level. Faculty members of this section included

¹Ibid.

²Iowa State University, Statement in Support of a College of Education, p. 13.

persons holding full or joint appointments in the following areas: agricultural education, art education, English, foreign languages, home economics education, industrial education, mathematics, music, physical education for men, physical education for women, psychology, safety education, sciences, social sciences, speech, and technical journalism. A director of secondary education, Professor Harold E. Dilts, was appointed to carry out the administrative and coordinating activities of this section. Both the elementary and the secondary sections offered student teaching experiences in cooperation with various local Iowa school districts. These practical experiences were coordinated through the office of the Director of Student Teaching, Wallace C. Schloerke.

Provisions were also made in the structure of the College of Education for professional studies, which comprised the graduate section of the College of Education. This section encompassed the following areas: adult education, guidance and counseling, higher education, educational administration, and research and statistics. Faculty members held either a full or a joint appointment in one of these areas and were assigned to the professional studies section.

In addition to the structural components listed above, three teacher education committees were also made a part of the organizational structure. The Curriculum Committee was established to develop general policy, and the chairman served

on the University Curriculum Committee. The Committee on Academic Standards was designed to assist the faculty in establishing academic standards for the admission and retention of students in the teacher education program. Finally, teacher education committees would be established in the College of Home Economics, the College of Agriculture, the College of Sciences and Humanities, and the College of Education. These committees

. . . would be concerned with recommending policy in curriculum matters and admission and retention of students. In addition they would serve to select students for admission to the Teacher Education Program.

The chairman of each college committee would be a member of the Curriculum Committee of the College of Education. One other member from each college committee would serve on the Committee on Academic Standards of the College of Education.¹

It is important to note that the College of Education did not suddenly emerge without a great deal of planning and forethought. According to Dean Virgil Lagomarcino, "the idea [of a College of Education] had been growing in terms of general discussions since the creation of a teacher education faculty in 1961."² Thus, the establishment of the College of Education in 1968 was the result of a logical developmental process, as well as a response to increasing enrollments, diversification

¹Ibid., p. 17.

²Interview with Lagomarcino, 9 April 1975.

of programs, and the distinct need for a central coordinating unit to administer the teacher education program.

In establishing a College of Education, Iowa State University brought the three basic functions of a land-grant institution--teaching and learning, research, and service--even closer to more fully satisfying the needs of Iowans.¹ Finally, the establishment of the College of Education

. . . recognizes a responsibility to function within the dynamically evolving goals of education in a democratic society. These goals include assisting in the development of mature and responsible individuals who:
(1) have the professional and personal competence to make positive contributions to society; (2) are capable of coping with rapid social and professional change; (3) are committed to continuous learning; (4) can understand and apply scientific principles and methods to the solution of problems; and (5) have an understanding and an appreciation of the processes and principles of democratic life.²

¹Iowa State University, A Statement of Mission, College of Education, 1974, p. 3.

²Ibid.

CHAPTER VIII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS OF
"A HISTORY OF UNDERGRADUATE TEACHER EDUCATION
PROGRAMS AT IOWA STATE UNIVERSITY, 1869-1968"

The purpose of this study was to provide a history of undergraduate teacher education programs at Iowa State University from the time of its formal opening in 1869 until the establishment of the College of Education in 1968. At the beginning of this investigation, a series of questions were posed to justify the undertaking of this study. At one time or another each of these was answered within the text. A brief answer to each of these questions, however, should serve to bring into focus the major findings of this investigation.

1. Was teacher education a major consideration in the establishment of land-grant institutions? The Morrill Act of 1862 provided federal grants of land to public institutions of higher learning. This act established the great system of land-grant colleges and universities which were developed on a cooperative basis between the government and the several states. According to the provisions of the act, while scientific and classical studies were not to be excluded and military tactics was to be included, the mission of these institutions was ". . . to teach such branches of learning as are related to agriculture and the mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes

in the several pursuits and professions of life." Therefore, while teacher education was not a major consideration of the Morrill Act, neither was it specifically excluded under the broad phraseology.

2. Was teacher education an important impetus in the founding of Iowa Agricultural College? The Iowa Agricultural College, as a land-grant institution, symbolized the advent of a "new education" developing directly in response to the spreading effects of the Industrial Revolution. The preparation of teachers as a specifically designated field of study was apparently not envisioned by either the founders of the college or Morrill himself. The Organic Act of 1858, which established the college, enumerated eighteen fields of study in which college students could engage; education was not included. On the other hand, the Iowa legislature did leave the door open for the development of curricula suited to the needs and interests of students. The chartering of the college, therefore, was fully in accordance with Morrill's vision of providing preparation for the several pursuits of life, and it soon became apparent in this developing frontier state that "teaching" was a needed "pursuit of life."

3. How and when did teacher preparation at Iowa State actually begin? Teacher education, prior to the establishment of professional courses at the beginning of the twentieth century, occurred primarily in the preparatory department, and

through normal lectures and the psychology course. Additional opportunities were available to teachers and administrators through summer laboratory experiences at the college.

The primary purpose of the preparatory course was to prepare students for regular collegiate work and to qualify students to teach in Iowa's rural schools during the winter months (November to March) when the college was closed for vacation.

Normal instruction, under the direction of President Adonijah S. Welch, was offered between 1869 and 1876. Normal instruction was composed of a series of lectures on pedagogy and was offered to students who expected to teach in Iowa schools during their winter vacation. Clearly, Welch believed that teacher education should be a part of the curriculum designed to meet student needs and interests.

In 1869 Welch proposed and subsequently taught psychology beginning with the first senior class in 1872. The work in psychology was designed for prospective teachers and also for students planning to enter other fields. Welch authored two texts on psychology--Talks on Psychology and The Teachers' Psychology--both of which were strongly teacher preparation oriented.

Additional opportunities for teacher education were evidenced in less formal ways. Lectures, articles, and proposed methods of teaching, particularly as they related to

industrial education and science were advanced by members of the faculty. The value of laboratory experimentation was being increasingly recognized, and use of the excellent laboratory facilities at Iowa State was offered to teachers and school administrators as early as 1877.

4. Who were the earliest leaders of the teacher preparation program at Iowa State, and what influence did they have on the College? The pre-professional period of teacher education at Iowa Agricultural College was primarily dominated by Adonijah S. Welch and William M. Beardshear. Welch, who was the College's first president and who served from 1868 until 1883, came to the College with an impressive pedagogical background. He was the first professor of normal instruction and psychology and taught other subjects as well. His influence extended beyond the College through his lectures on psychology to teacher institutes.

William M. Beardshear served as president of the College from 1891 to 1902. Also possessed of a strong pedagogical background, he taught psychology apparently in the Welch tradition. On at least two separate occasions, once in 1895 and again in 1897, Beardshear called for the establishment of a chair of pedagogy at the College. Although the formal establishment of such a chair does not appear to have been recorded, it is nevertheless true that the first professional teacher preparation courses were established in 1901 during

Beardshear's presidency. Beardshear's influence extended to state and national levels through his service as president of both the Iowa State Teachers' Association and the National Education Association.

Two other persons deserve to be mentioned, William I. Chamberlin and Mary Beaumont Welch. Chamberlain, who was president of the College from 1886 to 1890, taught psychology in the teacher education-oriented tradition started by Welch and reportedly used a Welch text in his classes. Mary Welch, wife of the College's first president, pioneered in the field of domestic economy. She is reported to have begun teaching cooking in her own kitchen, to have offered a series of lectures on domestic economy, and to have been largely responsible for the opening of the first collegiate experimental kitchen in any college at Iowa State in 1877. Although the primary purpose of this early work was the preparation of homemakers rather than teachers, Mary Welch was instrumental in building a sound foundation for the future development of teacher preparation work in home economics.

Although the exact extent and influence of these leaders is almost impossible to determine, some insights can be provided. The fact that the early work in teacher education was largely accomplished through the efforts and interests of college presidents must be considered of great importance due to their positions of influence. Furthermore, it must be

remembered that the first two professional teacher preparation courses to be offered at the College grew directly out of the early experiences in psychology and home economics.

5. Which divisions and colleges of the University provided teacher education programs prior to the founding of the College of Education? What teacher education programs were introduced in the different departments and when were they established? The next several pages summarize in outline form the teacher education programs which were offered at Iowa State University within the four major professional periods considered for this investigation and are categorized according to division or college and department.

- I. The Pre-Professional Period, 1869-1900: Opportunities for Teacher Preparation
 - A. Preparatory Course
 - B. Normal Instruction
 - C. Psychology¹
 - D. Summer experiences in the botanical, physical, and chemical laboratories

¹Due to the confusing designation of courses during the early decades, psychology was listed at varying times under department, school, and sciences related to the industries. In 1898, when divisions were first established, psychology was offered in the Division of Science and Philosophy in the Department of Psychology and Ethics.

II. The Early Professional Years, 1900-1917: Major Opportunities for Teacher Preparation

A. Division of Industrial Science¹

1. Department of Psychology²
 - a. Psychology and Ethics, 1900-1917
 - b. Courses for state teacher certification, 1909-1917
2. Department of History
 - a. History of Education, 1908-1913
3. Department of Civics
 - a. Methods of Teaching, 1907-1908 and 1909-1912
4. Department of Domestic Economy³
 - a. Two-year course in Domestic Science, 1901-1904
 - b. Teaching domestic art and domestic science, 1901-1911
 - c. School methods, 1908-1909

B. Division of Home Economics

1. Department of Home Economics
 - a. Theory and Practice Teaching in Home Economics, 1914-1916
 - b. Training in Teaching Home Economics, 1916-1917

C. Division of Agriculture

1. Four-year program in Science and Agriculture, 1904-1911

¹Prior to 1914 known as the Division of Science as Related to the Industries.

²Known as the Department of Psychology and Ethics from 1900-1901 and as the Department of Philosophy from 1901-1904.

³Known as the Department of Domestic Science from 1904-1906 and then the Department of Domestic Economy again from 1906-1911.

2. Department of Home Economics
 - a. Teaching Domestic Art and Domestic Science, 1911-1912
 - b. Theory and Practice of Teaching Home Economics, 1912-1914
 3. Department of Agricultural Education
 - a. Agricultural Education, 1911-1917
 - b. Training in Teaching Home Economics, 1916-1917
- III. The Early Professional Years, 1900-1917: Additional Opportunities for Teacher Preparation
- A. Division of Industrial Science
 1. Department of Literature
 - a. Reading for Children at Home and at School, 1914-1916
 2. Department of Economic Science
 - a. Five-year combined program with any other department in the Divisions of Agriculture, Home Economics, or Engineering, 1914-1917
 3. Department of Music
 - a. One-year Supervisor Music Course, 1909-1914
 - b. Two-year Supervisor Music Course, 1914-1915
 4. Department of Physical Training for Men
 - a. Theory and Practice of Coaching, 1915-1917
 - B. Division of Home Economics
 1. Department of Physical Culture for Women
 - a. Playground administration, teaching gymnasium work, and coaching, 1914-1917
 - C. Division of Agriculture
 1. Department of Agricultural Engineering Practical Mechanics, 1909-1917
 - D. Summer Sessions
 1. The majority of courses offered were concentrated in the fields of agriculture, home economics, and manual training.

IV. The Era of Vocational Education, 1917-1941: Major Opportunities for Teacher Preparation

A. Division of Industrial Science¹

1. Department of Psychology
 - a. Courses for state teacher certification and electives, 1917-1941
2. Department of Physical Education for Men²
 - a. Combined major - physical education and another science, 1930-1941
 - b. Electives, 1917-1941
3. Department of Industrial Science
 - a. Four-year program in industrial science, 1930-1941³

B. Division of Home Economics⁴

1. Two-year noncollegiate courses: Home Economics, 1917-1924; Home Economics and Agriculture, 1917-1924
2. Four-year program in home economics and agriculture, 1917-1928
3. Curriculum in occupational therapy in conjunction with the University of Iowa hospitals, 1932-1935
4. Four-year major sequences
 - a. Home Economics, 1919-1927
 - b. Home Economics and Applied Art, 1919-1929

¹Became the Division of Science in 1939.

²Prior to 1925 known as Physical Training for Men.

³From 1939-1941 known as the Curriculum in Science.

⁴Work in the Division of Home Economics was first organized as courses in home economics. In 1919 courses were organized under subdivisions. Beginning in 1924 subdivisions began to be organized as departments.

- c. Applied Art, 1927-1940¹
 - d. Textiles and Clothing, 1929-1937
 - e. Home Economics Vocational Education, 1926-1928²
 - f. Child Care and Training, 1929-1930
- 5. Department of Home Economics Education
 - a. Major in home economics education, 1929-1941
 - 6. Department of Child Development
 - a. Major in child development, 1930-1941
 - 7. Department of Physical Education for Women³
 - a. Major sequence in home economics and physical education, 1919-1934
 - b. Combined major - physical education with another science, 1930-1933
 - c. Electives, 1917-1941
- C. Division of Engineering
- 1. Department of Trades and Industries⁴
 - a. Course in Manual training, trades and industries, 1919-1926
 - b. Four-year course in industrial arts, 1924-1928
 - 2. Department of Industrial Arts
 - a. Four-year course in industrial arts, 1928-1940
 - b. Two-year course in industrial arts, 1928-1940

¹Teacher preparation courses were also offered in applied art from 1924-1927 prior to the establishment of a major sequence.

²In 1924, the subdivision of home economics vocational education became a full department and in 1926 began to offer a major sequence.

³Prior to 1920 known as Physical Culture for Women.

⁴In 1928 the Department of Trades and Industries became the Department of Industrial Arts and, in 1940, Industrial Arts was redesignated Industrial Education and organized as a curriculum within the Department of Vocational Education.

D. Division of Agriculture

1. Department of Agricultural Education
 - a. Agricultural education, 1917-1919
2. Department of Vocational Education
 - a. Agricultural education, 1919-1941
 - b. Agriculture and manual training, 1919-1939
 - c. Agriculture and science, 1928-1938
 - d. Industrial education, 1940-1941

V. The Era of Vocational Education, 1917-1941: Additional Opportunities for Teacher Preparation

A. Division of Industrial Science

1. Department of English, 1919-1941
2. Department of History, 1921-1939
3. Department of Hygiene, 1928-1941
4. Department of Public Speaking, 1928-1935
5. Department of Mathematics, 1928-1941
6. Department of Botany, 1928-1941
7. Department of Chemistry, 1928-1934
8. Department of Physics, 1928-1941
9. Department of Zoology, 1928-1939¹

B. Summer Quarters²

1. General courses of sub-collegiate grade for rural and grade teachers, 1917-1921
2. Noncollegiate courses, 1917-1928
3. Collegiate courses in agricultural education, home economics education, education in the industrial arts, sciences and technical subjects, psychology, and vocational education, 1917-1941

¹Teacher preparation courses offered by each of these departments were primarily related to methods of teaching.

²Prior to 1930 known as Summer Session.

VI. From Vocational Education to Education, 1941-1968: Major Opportunities for Teacher Education

A. Division of Science¹

1. Department of Psychology
 - a. Courses for state teacher certification and electives, 1941-1968
2. Department of Physical Education for Men
 - a. Combined major - physical education and another science, 1941-1951
 - b. Major in physical education with two minors, 1951-1968
 - c. Major curriculum in physical education, 1957-1968
 - d. Electives, 1941-1968

B. Division of Home Economics²

1. Department of Applied Art
 - a. Major curriculum in applied art, 1941-1968
 - b. Major in art education, 1963-1968
2. Department of Home Economics Education
 - a. Major in home economics education, 1941-1968
3. Department of Child Development
 - a. Major in child development, 1941-1968
 - b. Major in child development-elementary education, 1962-1968
4. Department of Physical Education for Women
 - a. Teaching minor in physical education, 1946-1959
 - b. Major in physical education (high school and college), 1959-1963
 - c. Major in physical education (K-12), 1963-1968
 - d. Dance option, 1965-1968

¹Became the College of Sciences and Humanities in 1959.

²Became the College of Home Economics in 1959.

C. Division of Agriculture

1. Department of Vocational Education¹
 - a. General vocational education, 1941-1962
 - b. Education, 1962-1968
 - c. Curriculum in agricultural education, 1941-1968
 - d. Curriculum in industrial education, 1941-1968

VII. From Vocational Education to Education, 1941-1968:
Additional Opportunities for Teacher Preparation

A. Division of Science

1. Curriculum in science, 1941-1959
2. Department of Science
 - a. Distributed Studies in the Sciences and Humanities, 1959-1968²
3. Department of English, 1941-1968
4. Department of Mathematics, 1941-1968
5. Department of Botany, 1941-1963
6. Department of Hygiene, 1941-1968
7. Department of Modern Languages,³ 1959-1968
 - a. Major in modern languages, 1961-1968
8. Department of Music, 1963-1968
 - a. Major in music education, 1967-1968
9. Department of Speech, 1959-1968⁴

¹Became the Department of Education in 1962.

²From 1961-1967 this program was known as the Curriculum in Science; in 1967 the titled reverted to Distributed Studies.

³Became Foreign Languages in 1967.

⁴Unless additional programs are listed, the departments of English, mathematics, botany, hygiene, modern languages, music, and speech offered courses primarily related to teaching methods.

B. Division of Agriculture

1. Department of Vocational Education
 - a. Radio and television education, 1946-1968

C. Summer School

1. Although the summer school continued to offer courses required for state teacher certification, the program was increasingly directed toward graduate students and advanced undergraduates. Courses included such areas as school administration, industrial education, adult education, guidance and counseling, agriculture, and home economics.

6. After the establishment of professional teacher preparation programs, which men and women were most influential in the development of teacher education at Iowa State University? The following summary includes the major figures associated with the development of teacher education at Iowa State and indicates their area or areas of contribution. They are listed in the order in which they appeared in the text. Portraits of these educational leaders appear within the body of the text.

Adonijah S. Welch - Normal instruction (1869-1875); psychology, 1872-1887.

Mary Beaumont Welch - Established home economics teaching in the land-grant colleges; teacher of domestic economy, 1869-1883.

William I. Chamberlin - psychology, 1887-1890.

William M. Beardshear - psychology, 1890-1900.

Orange Howard Cessna - psychology, 1900-1932.

Mary A. Sabin - head of the Department of Domestic Economy, 1900-1903; developed one of the first professional teacher preparation courses at Iowa State and paved the way for the development of home economics education.

Charles F. Curtiss - Dean of the Division of Agriculture and Director of the Agricultural Experiment Station, 1900-1933

Ashley Van Storm - first head of the Department of Agricultural Education, 1911-1913

Guy M. Wilson - head of the Department of Agricultural Education, 1913-1919; head of the Department of Vocational Education, 1919-1923.

John Ellis Evans - head of the Department of Psychology, 1923-1948.

Cora B. Miller - director of home economics vocational education, 1921-1928; head of the Department of Home Economics Education, 1928-1938.

Lydia Swanson - head of the Department of Child Development, 1935-1943.

William H. Lancelot - head of the Department of Vocational Education, 1924-1936; first Director of Teacher Training, 1934-1937.

Barton Morgan - head of the Department of Vocational Education, 1937-1939; head of the Department of Vocational Education and Director of Teacher Training, 1939-1950.

Adolph Shane - head of the Department of Trades and Industries, 1921-1928; head of the Department of Industrial Arts, 1928-1932.

Marjorie S. Garfield - head of the Department of Applied Art, 1948-1969.

Florence A. Fallgatter - head of the Department of Home Economics Education, 1938-1958.

Glenn R. Hawkes - head of the Department of Child Development, 1953-1966.

Ray J. Bryan - head of the Department of Vocational Education, 1950-1962; head of the Department of Education, 1962-1968; chairman, Teacher Education Committee, 1950-1959; chairman, Administrative Committee on Teacher Education, 1959-1960.

Clarence E. Bundy - head of the undergraduate curriculum in Agricultural Education, 1957-1968.

Lowell L. Carver - director of the undergraduate curriculum in Industrial Education, 1946-1968.

Louis E. Menze - head of the Department of Physical Education for Men, 1947-1959.

Barbara E. Forker - head of the Department of Physical Education for Women, 1958-1968.

Virgil S. Lagomarcino - Director of Teacher Education, 1961-1968; Dean of the College of Education, 1968.

7. What were the major factors that led to the establishment of a College of Education? Constantly increasing enrollments, the proliferation of new teacher education programs and courses, the growing need for a centralized authority to administer the total program, the desire for accreditation by NCATE, and the broad-based university philosophy of President W. Robert Parks constituted factors which, working in concert, produced a need for the establishment of a College of Education at Iowa State University.

8. Throughout its history what forces within and outside the university promoted and restricted the teacher education programs? Included among those external forces which helped to promote teacher education programs at Iowa State were state governors and school superintendents, national and state legislation, and Iowa State alumni. Iowa governors Jackson and Drake as well as State Superintendents Sabin and Barrett recommended the establishment of a chair of pedagogy at Iowa State during the waning years of the nineteenth century.

The primary national legislative force was the Smith-Hughes Act of 1917. This was followed later by other acts pertaining to vocational education programs such as the George-Reed Act of 1929, the George-Ellzey Act of 1934, and the George-Deen Act of 1936. More contemporary legislation which exerted a positive influence included the National Defense Education Act of 1958, and the Elementary and Secondary Education Act of 1965. Influential state legislation included the compulsory school attendance law of 1902, state legislation which required the teaching of agriculture, domestic science, and manual training in all the public schools of the state after July 15, 1915, the acceptance of the provisions of the Smith-Hughes Act by Iowa in 1917, and provisions for school consolidation which occurred throughout the first half of the twentieth century. Alumni of the college also played an important role. The efforts of the Iowa State Board of Education about 1913 to limit and eradicate certain courses, notably home economics, were thwarted at least partly due to alumni pressure visited upon the state legislature.

Within the College, administrators, faculty, and students all contributed to the growth of teacher education. Various administrators played key roles in fostering teacher preparation. The College's first president, Adonijah Welch, initiated teacher preparation work which set a precedent for future expansion as well as laid a sound foundation upon which

programs could be built. Presidents Chamberlain and Beardshear reinforced the work of Welch during the pre-professional period as did members of the faculty, most notably W. H. Wynn and Charles Bessey.

The twentieth century witnessed the call for further expansion of teacher education at the College from students who wished to teach vocational courses in Iowa's rural schools. The consolidation movement resulted in a demand for teachers that far exceeded the available state supply. In response to these needs of the state, both administrators, namely the heads of the departments which were providing teacher preparation work and their faculty primarily in vocational education, home economics education and industrial education, supported these demands and further expanded their programs during the nineteen twenties, thirties and forties.

The fifties and sixties witnessed a continuing effort to meet state teacher demands and the needs of Iowa State students as well as an effort to coordinate the various disparate teacher education programs. Coordination efforts were largely the result of the cooperative efforts of the College's administrators and faculty.

As Barton Morgan noted in an interview, both the State University of Iowa and the Iowa State Teachers College kept a "watchful eye" on the development of teacher education programs, however, the forces which acted to restrict the

expansion of teacher education at Iowa State were primarily attributable to the Iowa State Board of Education. Called into being in hopes of reducing program rivalries among the three state institutions of higher education, the Iowa State Board of Education, following its establishment in 1909, made specific recommendations which were to go into effect in September, 1913. These restrictions were so distasteful to the institutions and the opposition to them was so strong that they were rescinded before they ever took effect.

The matter of duplication was again raised in 1916 when the state board of education requested assistance from the U.S. Bureau of Education. The 1916 survey commission recommended the adoption of major and service lines of work with each state institution being assigned major fields of study to develop fully and service fields to complement the major fields. Under this arrangement, Iowa State was approved to pursue vocational work since the state needed teachers in these areas, but it was noted that this institution should restrict its courses in psychology and education to those required for a state teacher certification. The passage of the Smith-Hughes legislation within a year, however, largely nullified these recommendations.

In 1926, under a mandate from the state legislature, the Capen committee was authorized by the state board of education to investigate duplication. The commission's report was very

favorable to Iowa State. It acknowledged the sole right of Iowa State to offer degree curricula for vocational teachers of agriculture, home economics and, trades and industries and basically gave its blessing to existing programs.

Finally, in 1950 the Strayer commission, under authorization of the state board of education, again looked into the matter of duplication. This report questioned Iowa State's usage of the term "vocational education" with respect to its teacher preparation work in the sciences, recommended that programs for the preparation of school superintendents be limited to the State University of Iowa, and noted that the whole matter of teacher preparation among the three state institutions of higher education should be under constant study and evaluation. Perhaps the most significant point which was made by the commission, however, was its conclusion that duplication of work at the undergraduate level was not a serious matter. Although these investigative bodies proved to be a thorn in the side of Iowa State, their attempts to restrict the growth of teacher education failed, largely because the three state institutions had a tradition of independent development and the state board of education was essentially powerless in the face of national and state legislation.

An additional restrictive factor must also be noted. Certain faculty members within certain departments at Iowa

State, mainly chemistry and physics, failed to offer complete support of the teacher education program. According to Barton Morgan, this was due to their belief that education "lacked objectivity," and their failure to understand that "respectibility should be based on doing the best one can with the content and tools available." As with the state board of education, however, their efforts did little to deter the overall growth of the program.

Conclusions

The following conclusions are based on the findings of this investigation.

1. Teacher preparation has been an accepted part of the program at Iowa State University since its formal opening in 1869. Foundations for the development of professional teacher education in the twentieth century were laid by the University's first president, Adonijah Welch. Much of his early work was continued by Presidents Chamberlain and Beardshear.
2. The development of undergraduate teacher education programs at Iowa State University primarily represented a response to Iowa's demand for qualified teachers.
3. Both national and state legislation, particularly in the field of vocational education, constituted major forces in the development of teacher education programs.

4. Teacher education in vocational fields, for which Iowa State had full and sole authorization in Iowa by 1919, basically provided a vehicle for the establishment of non-vocational programs--a movement which accelerated between 1941 and 1968.

5. The independent development of the three state institutions of higher education, prior to 1909, contributed to the problem of program duplication. Patterns had been firmly established which the faculty and administrators of the institutions as well as their alumni were reluctant to relinquish.

6. Although the need for coordination of the diverse teacher education programs was recognized as early as 1933, efforts to achieve coordination fell short of desired ends until the College of Education was established in 1968.

Limitations

1. The use of the historical method as a major research technique contains certain weaknesses.

a. The use of historical criticism--ascertaining the validity and accuracy of sources--can be affected by the biases of the researcher. For example, the natural leaning toward one's own tentative conclusions can be illustrated by the author's acceptance of the following statement about President Welch, which appeared in a student literary magazine:

"Then after the student has taken psychology under Dr. Welch, he is better prepared for teaching than graduates of most normal schools." This statement was supportive of the author's belief that teacher preparation work did occur prior to the establishment of professional teacher education courses in 1901, although the complete accuracy and validity of the statement could not be checked.

b. Documents cited in the study may contain errors due to the original author's biases, his incompetence as an observer, or his inaccuracy as a recorder. An example of either bias on the part of the original author or his inaccuracy as a recorder can be found in a Cedar Rapids Gazette article cited in Chapter III in the section entitled, chair of pedagogy. The writer recorded that President Beardshear had established a chair of pedagogy at Iowa State College in opposition to the ruling of the state legislature. Records examined for this investigation indicated, however, that at no time was a chair of pedagogy formally established at Iowa State.

c. Observations are often recorded without any thought that they might be of future historical significance. An example of such a statement comes from the Aurora of 1879, which noted that "so many of our number are either temporarily or permanently engaged in educational research throughout the state and elsewhere." Data in support of this assertion would have been most helpful to a researcher.

d. While oral history, embodied in the interview, can provide valuable data, dangers exist with respect to subjectivity and biases. The interviewee may be overly eager to please the interviewer, or the interviewer may seek out answers to support preconceived conclusions. Also, the interview is a time consuming effort which places limitations on the number of subjects from whom one can obtain information. The interviews conducted for this study yielded far more positive than negative information with respect to the development of teacher education at Iowa State University. A predisposition toward the more positive aspects could have occurred for either of the two above stated reasons. Also, a lack of time contributed to the author's inability to complete other interviews which might have revealed additional negative findings.

2. The existence of incomplete, inaccurate, and uncatalogued data delayed research efforts, necessitated validation and cross validation of facts, and introduced uncertainties in some areas of interpretation. An example of incomplete data was the Charles F. Curtiss papers, some of which were destroyed. These could have contained data of value to this investigation. Inaccurate data was uncovered, for example, in an Iowa State Faculty Newsletter with respect to biographical information on Ray J. Bryan. The nonvalidity of certain statements were discovered during a personal interview with Professor Bryan, and the inaccuracies were corrected.

Uncatalogued data, such as the Iowa State Daily and the more contemporary reports of the Iowa State Board of Education and the Board of Regents, lead to a tremendous time-lag in research efforts.

3. The misplacement, loss, or destruction of data has probably caused the omission of some pertinent information. Materials in these categories include some Iowa State Department of Public Instruction materials, some of the Charles F. Curtiss papers, and the records of the Teacher Education Committee at Iowa State College during the chairmanship of Ray J. Bryan.

4. The lack of a central file containing either original or copies of original data relating to teacher education programs at Iowa State. Although great care was taken to locate all relevant information, the possibility exists that some materials were not located and searched.

5. The failure to receive complete cooperation in a few isolated instances with regard to achieving full access to all materials germane to this study may have led to unknowing omissions.

6. A lack of time and economic considerations also contributed to the limitations of this investigation.

Recommendations

Based on this study, the following recommendations are presented for consideration.

1. To facilitate management, articulation, and communication, the administration and faculty of the College of Education should be centrally located in one building.

2. The College of Education should begin to maintain its own archives. Since the components of the college are not centralized in one structure, this information should be placed in a College of Education file in the Iowa State University Library, Special Collections Room. Both pictorial and nonpictorial material related to teacher education personnel, programs, policies, and events should be collected and preserved. Ready access to all these materials should be granted to those pursuing serious research.

3. Each teacher education department should maintain separate historical files containing records relating to program additions and deletions and the reasons for them, course aims and objectives, departmental policies, and enrollment figures. A copy of each department report should be placed in the College of Education file.

4. A follow-up study of Iowa State teacher education graduates should be conducted every five years. The study should be structured so as to obtain information on the effectiveness of various specific programs, their strengths

and weaknesses, and suggestions for improvement.

5. A copy of this study should be made available to both present and future College of Education staff members to provide them with background information on teacher education at Iowa State--its inception, gradual development, and present structure.

6. Further studies suggested by this investigation include the following:

a. The history of undergraduate and graduate teacher education at Iowa State University following the establishment of the College of Education on September 1, 1968.

b. The history of graduate programs in teacher education at Iowa State.

c. The evolution, programs, and effectiveness of Normal Training High Schools as agencies of teacher preparation in Iowa.

d. The evolution, programs, and effectiveness of Iowa's county normal institutes as agencies of teacher preparation.

e. The whole matter of duplication of work in teacher education and other areas at the three state institutions of higher education in Iowa.

f. The history of education in Iowa from World War I to the present.

In summation, and in harmony with Thucydides' thesis that "an exact knowledge of the past may aid in the interpretation of the future," so it is that the events, policies, and circumstances that precede us can provide information which may guide us in our contemporary decisions.

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APPENDIX A

THIRD CLASS (Lowest)

1. Intellectual and written arithmetic
2. Ancient and modern geography
3. General history and history of the United States
4. Elements of arts and sciences
5. Reading, grammar, and declamation
6. Bookkeeping
7. Sacred geography

SECOND CLASS (Middle)

Items 1 through 7 continued

8. Algebra
9. Rhetoric and composition
10. Geometry
11. Natural Philosophy
12. Natural theology

FIRST CLASS (Highest)

Items 5, 8, 9, 10, and 12, continued

13. Chronology
14. Moral philosophy
15. Forensics
16. Criticisms on English authors
17. Practical mathematics (navigation, surveying, etc.)
18. Experimental lectures on natural philosophy
19. Evidences of Christianity

Except for the addition of philosophy of history, chemistry, intellectual philosophy, linear drawing, and logic (all at the discretion of the masters) and trigonometry, French, and the Constitution of the United States, the course remained unchanged until 1852, when a very similar four-year curriculum was introduced.¹

¹Butts and Cremin, p. 279.

APPENDIX B

Amy Ambrose Cash
 202 Main
 Lenox, Iowa (circa 1900)¹

With all the good books, methods and prepared teachers of to-day, it is impossible for students of the present to understand the schools as they used to be. My first certificate was written in the County Superintendent's office and she did the grading. Anyway I passed and was proud of my first certificate. These certificates lasted from two to three years and then we had to attend a week of normal school in the County Seat and write another test.

My education above eighth grade was one year at the Corning Academy run by the Presbaterian Church. I was then about twelve years of age, The High School was for pupils who lived in town only. Teachers were allowed to teach as young as fourteen if they could pass a test. And believe it or not, some made what was considered good teachers in those days. It depended mostly on the interest a teacher could create and how she got along with the pupils. I being too young to teach, drove about the country in a horse and buggy and taught music for four years.

My first school had pupils all the way from four to nineteen. Schools were large as few ever went to a higher school. The largest I taught had thirty-four pupils on roll in all grades and in between. It was necessary to correlate many classes. The younger ones seemed to learn from the older ones and the oldes ones helped the younger ones. I received the magnificent sum of \$34 per month.

I taught for five years before going to college and had taked correspondent courses for entrance. Colleges were not crouded in those days and one could get in anywhere if they could pass a test. During my teaching I taught in the rural schools and in the third, fifth and sixth grades. Because

¹Based on the assumption that Amy Ambrose Cash taught school in Taylor County, Iowa, my research supports the date circa 1900. Cash notes that she was paid \$34 per month. According to the Iowa Department of Public Instruction Report, 1903-1905, p. 111, the greatest number of teachers in Taylor County in 1903-1904 received salaries between \$30 and \$35 per month. Cash also indicates that she was about sixteen when she started teaching in the rural schools. Legislation in 1902 set the minimum age for all Iowa teachers at 18 years.

wages were so poor I took the Civil Service examination and worked in Washington D.C. during World War One, starting at \$1500 per year. Teachers were starting at from \$65 to \$70 per month.

Poor as they were I really liked the rural schools. We taught just the basic subjects, reading, writing, arithmetic, history, physiology, grammar some government and anything else we could think of. We had no library and few schools had an old organ. Music being my subject, I carried my fiddle to school and played while the children sang. They liked it.

The teacher in the rural school was also a janitor. building the fires on frigid mornings and lugging in as much as four ton of coal during the cold weather. We swept the floors and sometimes scrubbed them. Later we had a sweeping compound but in my first school I really raised the dust. My strongest line was mathematics and I was often ask to measure cribs of corn for some farmer in my neighborhood. I used to mark on the crib where the 250 bu came to, the 500 bu, the 750 bu and the 1000 bu if the crib was that large. Then I measured the oats bin and marked it up to. I took the older pupils with me and had them learn to measure too, really applied arithmetic. We were really a "Jack of all trades." Why we stuck with it-don't ask me, I suppose it was because nothing paid better and there was very little else to do. It was hard work. We had to supervise the play ground or we might have fights on our hands. I always found that a good laugh over some funny incident was appreciated by the pupils and relaxed a lot of tension.

In those days very few went above eighth grade and many boys stayed out in the spring and fall to help put in crops and harvest it. Anyone who had a year above eights grade was considered well educated. Many High Schools had not more than four who finished the four years. During the latter part of my teaching things improved some but, I think, even the colleges were not up to the High Schools of to-day. Latin and Creek were especially stressed, which did the pupil very little good as I think, unless they expected to teach it.

Those were the "Good old Days" or were they. As I look back from my nearly 86 years, I wonder if the youths of today appreciate their advantages.

APPENDIX C

CLASSIFICATIONS OF CERTIFICATES¹
 [Effective October 1, 1907]

(The minimum age of one eligible for a uniform county certificate is eighteen years; for a state certificate nineteen years.)

1. Provisional Certificate. Issued only in emergency cases and on recommendation of the county superintendent for six months. Valid upon registration only in the county for which it is issued.

2. Third Grade Uniform County Certificate. Issued upon examination for six months. Valid upon registration in any county. But two certificates of this grade may be issued to the same person. The county superintendent is not required to register third grade certificates if the schools can be filled with teachers holding higher grade certificates.

3. Second Grade Uniform County Certificate.^{*} Issued in first instance upon examination for a term not to exceed two years. Valid in any county upon registration. Subject to one renewal upon examination in one professional subject.

4. First Grade Uniform County Certificate.^{*} Issued in first instance upon examination for three years. Valid upon registration in any county. Subject to renewal upon examination in one professional subject.

5. Special Uniform County Certificate. Issued for three years. Entitles the holder to teach only the subject or subjects named in certificate. Subject to renewal upon examination in one professional subject.

6. Second Grade State Certificate. Issued in first instance upon examination or upon graduation from an approved normal school, or upon a state certificate or proper rank from another state. Valid in any county upon registration. Subject to renewal upon credentials.

7. First Grade State Certificate. Issued upon examination or upon graduation from an approved college or university of this state, or upon graduation from a four-year approved normal school of this state, or upon a state certificate of proper rank from another state. Valid in any county upon registration. Subject to renewal on credentials.

*In transferring from the old system to the new certain county certificates issued prior to October 1, 1905, are renewed under the rules already announced by the Board.

¹Iowa Public Instruction Department Report, 1907-1908, p. 139.

8. Life Diploma.** Issued upon examination for life. No person eligible to examination who has not held a state certificate and who has not taught for at least three years under the supervision of the State Board. Valid in any county upon registration.

**Examination is not required in subjects already taken for the state certificate held.

APPENDIX D

TEACHERS' CERTIFICATES¹STATE CERTIFICATES

In accordance with the law passed by the Thirty-first General Assembly, the State Board of Educational Examiners will grant five year first grade state certificates to graduates of the Iowa State College who have completed the following work:

- (1) Psychology--Six semester hours.
- (2) Education--Fourteen semester hours.
 - a. Principles and Science of Education. Limited to semester hours.

Under this head may be included Child Study, Philosophy of Education, Philosophy of Teaching and Ethics or Psychology of Conduct.

- b. History of Education. Limited to eight semester hours.

Under this head History of Philosophy or History of Industrial Education may be offered.

- c. General and Special Methods of Teaching. Limited to four semester hours.

Under this head accredited colleges may offer courses in methods of teaching secondary subjects to students who have made majors of these subjects.

This first grade five year state certificate may be renewed at the end of five years upon proof of at least three years of successful teaching.

SPECIAL STATE CERTIFICATES

(1) The special state certificate (five year) for domestic economy, is issued to the graduates of the Home Economics course at the Iowa State College who have a record of six semester hours in psychology.

(2) The special state certificate (five year) for agriculture to the graduates in Agriculture at the Iowa State College who have a record showing six semester hours in psychology.

¹Iowa State College Catalogue, 1913-1914, pp. 388-389.

(3) The special state certificate (five year) for manual training to the graduates in the courses in the Division of Engineering who have had not less than two years of shop work with the six hours in psychology.

This special state certificate may include any two of the above subjects, but not other high school subjects.

It is recommended that a person desiring to teach shall elect the courses which will secure the regular five year state certificate upon graduation. This will entitle him to teach any subject and also hold any position in the high school.

For the courses which count toward the five year state certificate see "Notes" under Psychology and Agricultural Education in this catalogue.

For special state certificates for manual training for the graduates of the Agricultural Engineering course and also information concerning other preliminary or special uniform county certificates correspond with the State Superintendent or see Uniform County Certificate Regulations.

SPECIAL UNIFORM COUNTY CERTIFICATES

A graduate of any four year course in the Iowa State College of Agriculture and Mechanic Arts may be issued a special uniform county certificate for his major subject or for his major or minor subjects without examination.

A person wishing a special certificate should send a copy of his college record to the President of the Educational Board of Examiners, Des Moines, Iowa. If the record is approved for the kind of certificate requested, a statement to that effect, together with an application blank, will be mailed to the applicant. The application, together with a fee of \$1.00, should be presented to the county superintendent of the county in which the applicant has been teaching or of the county in which he expects to teach, who will mail it to the President of the Educational Board of Examiners.

A special uniform county certificate may be issued for any one or two of the following subjects or group of subjects: Music, Drawing; Domestic Science or Home Economics; Manual Training, German; French, Physical Culture; Rhetoric, English, Composition, English and American Literature; History and Political Science; Algebra, Geometry, Trigonometry; Physiology; Geology; Botany; Zoology; Physics; Chemistry; Astronomy; Agriculture.