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Abstract

The first of four chapters in this booklet on proposed minimum standards is a general discussion of accreditation procedures; it is designed to assist departments of education in reviewing, developing, and applying standards for legal accreditation or approval of programs for educating teachers. Chapter 2 contains principles and standards for the noncurricular provisions that support a program in teacher education: purposes and objective, organization and administration, student personnel program, admission policies and practices, faculty and facilities and instructional materials. Chapter 3 and 4 set forth basic curriculum principles and standards for undergraduate and graduate programs. (The introduction notes that revision of the 1952 circular involved development of standards in the various fields, provided in this document in much greater detail.) The undergraduate section covers general education, professional education, and teaching majors in elementary school teaching, art education, business education, English, education of exceptional children, modern foreign languages, health education, health and physical education, home economics, industrial arts education, school libraries, mathematics, music education, science, and social studies. The graduate section, besides general guidelines, covers specific

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P R O P O S E D   S T A N D A R D S  
for   S T A T E   A P P R O V A L   of  
T E A C H E R   E D U C A T I O N

A project of the National  
Association of State Directors of  
Teacher Education and Certification  
assisted by the U.S. Office of  
Education

Accrediting Standards Revision Committee

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A revision of the 1952 Circular No. 351, Proposed Minimum Standards  
for State Approval of Teacher Preparing Institutions

U.S. DEPARTMENT OF  
HEALTH, EDUCATION, AND WELFARE

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## F O R E W O R D

Legal accreditation or approval of institutions and programs for the education of teachers is a responsibility of the several States. Through constitutional or statutory provision, all States have either direct or implied authority 1) to accredit or approve both private and public institutions and programs for the education of teachers, and 2) to establish the rules, the procedural regulations, and the means of implementation by which such authority may best be discharged and its purposes accomplished in the public interest. This authority, deriving from the people in each State, is most commonly vested in the department of education, its controlling board, and the chief school officer. Within State departments of education, the accrediting function is normally one of the responsibilities of the director of teacher education and certification.

Between 1950 and 1952, the National Association of State Directors of Teacher Education and Certification (NASDTEC), assisted by staff of the National Commission on Teacher Education and Professional Standards of the National Education Association, and of the U.S. Office of Education, developed its Proposed Minimum Standards for State Approval of Teacher Preparing Institutions, OE Circular No. 351.

In 1954 the professional accreditation of teacher education at the national level was transferred from the American Association of Colleges for Teacher Education to the newly created National Council for Accreditation of Teacher Education. Advances in teacher education over the decade and the focus of national professional accreditation on broad program areas have led NASDTEC to review its previous work and develop this extensive revision.

The standards proposed support the program approach and set forth representative thinking on standards for the various curriculums in teacher education. They are published by the Office of Education to assist the States in their efforts to improve and maintain the quality of teacher education.

Arthur L. Harris  
Associate Commissioner  
Bureau of Elementary and  
Secondary Education

LETTER OF TRANSMITTAL

N. Blaine Winters, President  
National Association of State Directors  
of Teacher Education and Certification

Dear President Winters:

Submitted herewith is the report of the Accrediting Standards Revision Committee.

Following the annual meeting of the National Association of State Directors of Teacher Education and Certification at San Diego, Calif., in June 1960, President Wayland Osborne of Iowa obtained indications of assistance and cooperation from the U.S. Office of Education for a revision of the 1952 publication, Proposed Minimum Standards for State Approval of Teacher Preparing Institutions, and appointed this committee to proceed with the necessary study and revision.

On the invitation of the Office of Education the committee met in Washington, D. C., March 6-8, 1961, reviewed the problem, conferred with professional leaders, decided in favor of a program emphasis, developed a tentative outline, and assigned portions of the writing task to various committee members. Statements of standards prepared by the several States and by national professional associations--including those in the various subject fields--were obtained and examined. Tentative drafts of new material were exchanged by mail.

At the annual meeting of the Association at University Park, Pa., in June 1961, the progress of the project was reported. Portions of the material were distributed and discussed. At that time the committee met for a day to apply the suggestions of the Association to its work.

Although some exchanges by mail were carried on during the following 15 months, the committee was not able to convene again under Office of Education sponsorship until October 14-17, 1962. At the Washington, D.C. meeting of this date progress was assessed, new materials written, and new assignments made.

On the occasion of the Louisville, Ky., meeting of the NASDTEC-AAAS Project, the Office of Education made provision for an extended meeting of the committee, April 17-20, 1963. New statements were examined, controversial issues were discussed, and additional copy was prepared. Assignments were made for compiling, reviewing, and editing the proposed standards in preparation for the annual meeting of the Association at Columbus, Ohio, in June 1963. Two copies of the complete draft of the revision were provided for each member of the Association so that he could submit his recommendations in writing for consideration at the Columbus meeting.

In May 1964, the Office of Education published the edited revision incorporating those recommendations. It was issued as an experimental edition for consideration at the annual meeting of the Association in 1964 and for experimental use of the State departments of education. At the annual meeting of the Association in New York City in June 1965, recommendations were reviewed and the standards were adopted by the Association for final editing and publication.

Respectfully submitted,

Mary Ellen Perkins, Chairman  
Accrediting Standards Revision Committee

Atlanta, Ga.  
February 15, 1966

## P R E F A C E

Standards in this document are proposed primarily for the use of State departments of education. They represent the consensus of department of education personnel who are assigned the legal responsibility for teacher education and certification in the several States. Although addressed to the States, these standards should prove useful to personnel in institutions that educate teachers, both as they appraise their programs and as they prepare for program appraisal by the State agency.

The term department of education is used in this document to designate the legal agency of each State responsible for the public schools and for the accreditation of programs of teacher education. The term accreditation is used generally to indicate the responsibility designated variously in different States by such terms as accreditation, approval, or recognition.

Particular emphasis has been given in this revision to the development of curriculum standards in various fields. In this respect it provides much greater detail than the original document and forms a basis for cooperative action, with personnel in such fields looking toward still further refinement.

These standards are minimum standards. They are submitted in the hope that they may become the basic minimum prescribed in all States. Some States prescribe much higher standards. Others are seeking to do so. Nothing contained herein should be construed as an attempt to lower standards to a common denominator, or to discourage innovation and experimentation in the development of teacher education programs. Sufficient flexibility is provided for each State to make whatever adaptation is deemed advisable in its upgrading of existing standards.

This document is also intended to help upgrade the quality of instruction in institutions engaging in the education of teachers and to promote a greater degree of uniformity in practice among the States. These are goals which are worthy in themselves. The immediate practical consideration, however, is that the experimental adoption of these standards by all States provides a working basis for measuring teacher education programs for minimum adequacy. Full achievement of the goals should follow.

NATIONAL ASSOCIATION OF STATE DIRECTORS OF  
TEACHER EDUCATION AND CERTIFICATION

Revision of U.S. Office of Education Circular 351  
"Proposed Standards for State Approval of Teacher Education"  
Resolution Adopted June 22, 1965

- WHEREAS: The revision of Circular 351 Proposed Standards for State Approval of Teacher Education has been accomplished by the Committee on Standards as the result of four years of study by NASDTEC, involving review of the standards and procedures by various college and professional groups, BE IT THEREFORE
- RESOLVED: That NASDTEC approves the revision of Circular 351 proposed by the Committee on Standards, and BE IT THEREFORE
- RESOLVED: That the President is authorized and directed to carry to completion the plans for the publication of the revised Circular 351 by the U.S. Office of Education, and BE IT THEREFORE
- RESOLVED: That the State Departments of Education of the several states are urged to use the standards and procedures outlined in the revised Circular as the guidelines or the basis for State approval of teacher education, and to publish a list of colleges and programs approved on the basis of these standards and procedures and BE IT FURTHER
- RESOLVED: That the State Departments of Education of the several states are urged to recognize graduation from a program approved by another state on the basis of the procedures and standards outlined in the revised Circular as one basis for issuing certificates, and BE IT FURTHER
- RESOLVED: That the President of NASDTEC is authorized and directed to arrange for the publication of a combined directory of the institutions and programs in all of the respective states which have been reviewed by the states on the basis of the procedures set forth and judged to meet the revised standards, and BE IT FURTHER
- RESOLVED: That NASDTEC approves the appointment of a new Circular 351 committee in 1969, to be charged with the responsibility of reviewing the document during 1969-70 and of proposing further revisions leading to a third edition for publication in 1970.

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## Chapter I

### PROCEDURES OF ACCREDITATION OR APPROVAL

The procedures by which standards are developed and applied to teacher education at the State level have initial and far-reaching significance. This general discussion of the accreditation procedures is presented to stimulate and assist departments of education in reviewing, developing, and applying standards for legal accreditation or approval of programs for educating teachers.

Authority.--Every State department of education is involved either directly or indirectly in the accreditation or approval of teacher education programs within higher education institutions of the State. This involvement includes both public and private colleges and universities. In some States statutes provide specifically for this function, and the rules and regulations of a State department of education implement the authorization granted by the legislature. In States where statutes do not do so, the board of education or department of education supplies the legal authorization for teacher education program accreditation or approval, usually as an application or extension of its authority in teacher certification.

Since each State department of education is the legal agency for passing judgment on teacher education within its borders, every State should provide explicitly--either through State statutes, board of education rules and regulations, or administrative policies of the department--the legal authority for the accreditation or approval of programs of teacher preparation in the various colleges or universities of the State.

Autonomy.--Each State department of education must have the autonomy to carry on such a program in the manner which that office believes is most effective in its State. The accreditation process, as it has evolved both nationally and regionally, and for both professional and general purposes, reveals certain common practices, however. These practices lead to the suggestions which follow.

Current Practices.--Today, it is important that every State carry on an accreditation or approval program and have well-defined procedures for implementing the process.

Advisory Group.--To discharge its legal responsibilities it is appropriate and desirable for the State department of education to seek the advice, counsel, and assistance of an advisory group, representing as nearly as possible a cross section of all segments of the teaching profession, which will work with the staff of the State department of education in determining standards, policy, and procedures. Advisory group membership should be reserved for educators with competence in and concern for teacher education. Teachers, supervisors, administrators, pupil personnel workers, teacher educators -- both subject-matter and professional specialists -- and key department of education personnel should be included.

The State department staff member responsible for directing teacher education and certification should be a major source of continuity in the membership of an advisory group and should provide the liaison between teacher education institutions in the State and the State department of education. He should provide not only strong leadership but also advisory and consultative service to institutions in the development and maintenance of their education programs.

Criteria.--Decisions to accredit should be made in terms of the criteria used. Inasmuch as State accreditation or approval of teacher education programs is directly related to certification regulations, criteria and certification regulations should each be supportive of the other. Thus, the extent to which the programs meet both criteria and certification regulations should determine accreditation or approval.

Visiting Teams.--The procedure leading to approval of programs should be carried out by visiting teams, with the representative membership of such teams selected by the State department of education. If such a procedure is used, each visiting team should be chaired by a person chosen for his experience and general knowledge of the kinds of programs to be evaluated. Visiting teams should be as representative of the total teaching profession as possible and still remain small enough to work effectively. Each member of the team should have special competencies, background, and experience, and be able to contribute to the total team.

The State department of education may find it advantageous to arrange periodic workshops or training sessions for chairmen and members of visiting teams. Over a period of years each State might develop a resource of well-prepared personnel for service on visiting teams. Each year new personnel could be added. This would mean ongoing orientation and preparation.

Other Accrediting Agencies.--The department of education's legal teacher education accreditation or approval program should take into consideration relationships with other accreditation groups. Of major importance are the six regional accrediting agencies. Each has certain unique functions, but in general their purposes and procedures are similar. It is important that each State department of education correlate its work insofar as possible with the regional association functioning in the State. State departments may find it desirable to establish certain policies jointly with the association so that visiting committees of both groups can work within a framework of mutual understanding and with certain common objectives and procedures.

Further, it seems desirable that each State department of education develop a working relationship with the National Council for Accreditation of Teacher Education (NCATE). This would involve developing individual State policies with a knowledge of NCATE policies, by working through the Council and its staff in Washington, D.C. It would be advantageous if visiting committees of both groups, as well as visiting committees of the regional associations, would function cooperatively in the working relationships developed by the policy-making representatives of each group.

For example, the preparation of this publication was undertaken with the understanding and cooperation of the NCATE staff. The standards of the Council are designed to provide for the appraisal of teacher education for three broad categories: Elementary school teachers, secondary school teachers, and school service personnel. A chief need at the State level is to develop standards that are specific within subject-matter areas.

There are also groups concerned with the accreditation of various specialties, such as business, chemistry, and music. State departments of education need to be aware of the work of these groups and of their visitation schedules in the State's universities and colleges. It would be helpful to everyone concerned, and particularly to colleges and universities, if it were possible to coordinate the work of the respective visiting teams. The State department of education appears to be the logical office to attempt to coordinate such efforts.

Procedural Arrangements.--There are many procedures which every State will need to work out in order to carry on a teacher education accreditation or approval process. The criteria or standards used by the State in its evaluations are among the important published materials which should be available through the department of education. Other materials include instructions to visiting teams, schedules and forms of institutional self-evaluations, or application reports, and the outline and nature of visiting team reports. Invitations to persons for membership on visiting teams should emanate from the department.

The development by the State department of education of a manual or handbook setting forth State policies would be appropriate. Since policies are often changed, a policy or procedure manual would need frequent revision.

Organized procedures for the review of visiting committee reports by the department of education are needed. These procedures may operate either through the department's own staff or through the advisory group. The procedures should be so stated that they are clear to all concerned, including the public. Each step between the visit and ultimate approval or disapproval should be stated clearly.

Lists of Approved Programs.--The practice is becoming more common for State departments of education to issue lists of institutions whose programs they have accredited or approved for teacher education. The practice is recommended. Such lists should indicate precisely the programs for which each institution is approved. Since programs tend to change, lists should bear general expiration dates and provision should be made to assure wide circulation of new lists and invalidation of the old.

## Chapter II

### PRINCIPLES AND STANDARDS OF ORGANIZATION

This chapter covers the organizational, administrative, and operational provisions that support a program in teacher education. The next two chapters deal with the particular programs. The material on the supporting non-curriculum aspects of teacher education applies alike to single- and multi-purpose institutions and to institutions offering only one program in teacher education, as well as to institutions offering many programs. In consequence, State departments of education are cautioned to make provision in the public interest for the appropriate application of their own standards to the particular institutions in their own State.

#### Purposes and Objectives

Programs for the effective education of teachers are expected to operate with appropriate purposes and objectives. These should be made explicit, both in formal statements and in evidence of their practical application. An institution seeking initial and continuing accreditation or approval of teacher education programs should include in its catalog clearly defined statements of such purposes and objectives. Objectives for teacher education should be consistent with those of the institution as a whole. Programs for the education of teachers should be formulated to achieve the desired outcomes. A fundamental criterion of excellence in an institution is the extent of awareness on the part of all concerned of its aims and goals, and the degree to which they are being achieved.

There should also be a definition of the scope and limitations of the teacher education offerings and services of the program, indicating: 1) Whether the program is undergraduate or graduate; 2) whether it is elementary or secondary; 3) whether secondary teachers are prepared for the specific subject-fields offered; and 4) whether graduate work provides preparation in the specific school service programs offered. The institution should be expected to demonstrate that it has the facilities and activities necessary to operate the proposed programs. Such factors are not ends in themselves, but must be judged finally in terms of the quality of the institution's product.

## Organization and Administration

Sound instructional programs can operate effectively only when supported by competent administrators and an alert and interested board of control. Consequently, attention should be given to the manner in which the administration operates, its responsiveness to institutional needs, and its efforts to appraise its own effectiveness in terms of the following criteria.

Board of Control.--Control should reside in a board of trustees or otherwise designated board. Terms of office should be arranged to provide desirable continuity within the board.

The function of the board should be that of assuring for the institution sound philosophies and policies, facilities, and leadership which will provide the best possible services to the students and faculty, and will insure for the college and the students a sound educational program. In the discharge of this function there should be clear evidence of the board's appreciation of its responsibilities in providing a program of teacher education.

General Administration.--Under the direction of the president as the chief administrative officer, adequate provision should be made for the performance of all administrative functions affecting teacher education by personnel competent in their respective lines of activity. A chart showing the organization of the institution should be available. In evaluating the administration of teacher education in an institution, appraisal should be made of the way in which functions are performed, the suitability of the organization, and the competence of the personnel. Consideration should be given to salary schedules and rank, retirement allowances, tenure, group insurance, sabbatical leave, sick leave, and funds for inservice development of the faculty and service by the faculty in professional development on a State, regional, or national basis.

Institutions which prepare teachers should provide information for administrative and faculty members, outlining the applicable administrative policies. Such information should state and interpret the functions of the board of control, the faculty, and the staff of administrative officers with particular reference to teacher education.

Institutions which accept responsibility for the education of teachers should establish and designate the appropriate division, school, college, or department within the institution charged with accountability and authorization to act, within the framework of general institutional policy, on all matters relating to the teacher education programs. Furthermore, they should be so organized that other institutional units concerned with the teacher education programs will maintain effective cooperative relationships with the education unit.

Finances.--Satisfactory realization of the general standards outlined here is predicated upon a sound financial structure. Resources adequate for the accomplishment of announced purposes must be available, and current income for both public and private institutions must be such as to enable an institution to carry on its proposed work. Evidence of financial stability must be presented.

In examining the financial condition of an institution, consideration should be given to the income available for teacher education purposes and the manner in which that income is expended. An institution is expected to operate on a budget prepared in accordance with sound financial and educational practice and to issue an annual financial statement, audited by a properly qualified outside agent, giving a clear and accurate picture of its financial status. With reference to teacher education, particular attention should be paid to the relative amounts expended for instruction, administration, maintenance, equipment and supplies, library, student activities, capital outlay, and debt services. The financial records of the college should be kept in such form that rapid analysis is possible at any time to determine the economic status of the institution.

Extended Services.-- Institutions offering extended services, including summer sessions, evening and weekend programs, off-campus extension or correspondence classes, and survey and consultative services, should be expected to set forth adequate resources for conducting such services. They should indicate the administrative and operational provisions established to assure quality in such special services, in the regular program, and in the ways in which the two complement and support each other.

### Student Personnel Program

Organized Counseling.--The obligation of the college extends beyond the training of the intellect and includes responsibility for development of a balanced personality. This is obviously highly important in teacher education. The institution should utilize its total faculty resources in providing a guidance program for assisting students in the selection of their studies and extracurricular activities, for the analysis of causes of academic deficiency, and for the adjustment of specific problems. The obligation also includes maintenance of effective public relations, followup services after placement, guidance into real education opportunities, and continuing redirection of persons unsuited for service in the teaching profession. Such functions should be performed effectively by qualified persons with delegated authority and preferably with special preparation in personnel work. The responsibility of the college for student guidance begins with a well-organized program for introducing new students to the purposes and problems of college life, and continues throughout the undergraduate years. It includes an effective placement service assisting young graduates to find their proper places in the teaching profession.

Supporting Student Services.--Each student should know where to secure guidance and who is officially responsible for his program. Each institution should be able to present an organization chart of the student personnel program, showing all services directly connected with student personnel work and their relationships with each other. The student personnel program should also be concerned with student government. Attention must be given to a plan for maintaining desirable student-faculty relationships.

Data on Teacher Supply and Demand.--An important specialized function of guidance and counseling in institutions which prepare teachers is the collection and maintenance of current data on teacher supply and demand, such data being available to all counselors, who in turn interpret them to all students in preparation for teaching.

Adequate Student Records.--It should be the responsibility of the college to maintain an adequate system of student personnel accounting, including a permanent cumulative record of each student enrolled. This is especially important in teacher education. To facilitate ready interpretation by certification authorities and prospective employers, the graduate is entitled to an intelligible and adequate transcript of record, including a statement of course titles. This transcript should include a descriptive record of the student teaching experience.

### Admission Policies and Practices

Admission to the Institution.--One index of an institution's caliber is its admission policy, as evidenced by requirements, standards, and procedures. The indiscriminate use of entrance probation is considered evidence of unsound admission practice. The fidelity with which a college complies with announced entrance requirements is of primary importance.

For admission the institution should require either graduation from a secondary school or its authorized equivalent. Files should contain a complete transcript, including courses, grades, and other appropriate information properly signed by the high school principal or other duly authorized official.

Students seeking readmission, or admission through transfer from other institutions, should meet the standards required of regularly enrolled students of similar classifications. Credit transferred should be from institutions approved in conformity with State regulations.

Provision should be made within the institution for orderly methods of obtaining and filing information relative to candidates applying for admission.

Admission to Teacher Education.--There should be definitely announced policies and a systematic screening method by which the student may make application for admission to professional teacher-education curriculums. There should be a definite method for selection and retention of applicants. Such policies should include the time and possible alternatives for admission.

Among the standards for acceptance are the following:

1. Quality of scholarship
2. Personal and social fitness and demonstrated leadership or indicated potential
3. Physical and mental health for the tasks to be performed
4. Voice, speech, and competency in oral and written English
5. Participation in extraclass activities and related experiences.

### Faculty

Faculty Competence.--The quality of the faculty is one of the more important factors in judging the effectiveness of an institution. Appraisal of the faculty should be made in terms of its competence to provide the program for which approval is being sought. Each faculty member -- in subject-matter and in professional fields -- should have a high degree of competency in his area. The formal education of the staff is of vital importance. Major instructional responsibilities must be in the hands of well-educated and experienced teachers. All who teach college courses should have a master's degree; no less than 20 percent should have a doctor's degree. Where graduate programs are offered, the percentage holding the doctorate should be higher. At least one person with a graduate major in the psychological field and one in social educational foundations should be included in each faculty. The education school or department head should hold the doctorate.

Academic preparation of faculty members should indicate, as a desirable goal, that they have mastered a reasonable knowledge concerning individual mental and physical growth and development, with specific emphasis on psychological aspects related to learning. Faculty members should also understand the function and place of the school in society and should be highly competent in the techniques of instruction. Those who are teaching professional subjects should have actual experience in situations similar to those for which the students are being prepared. Those who teach courses in subject areas should be familiar with practices concerning such areas in the elementary and secondary schools. Evidence should be submitted about the intellectual alertness of the college teachers and their experience and participation in such professional activities as curriculum improvement,

research, writing, and travel for educational purposes. Staff members should be expected to show that they are growing professionally through advanced study, research, and participation in the activities closely related to their instructional assignments.

The institution should demonstrate that its policies of selection, retention, and promotion of personnel are effective in providing teachers who are sincere, competent, and professional.

Service Load of Faculty.--The total service load should be interpreted to include not only regular instruction but also extension teaching, committee assignments, extracurricular activities, and supervisory responsibilities in connection with thesis advisement. It should also include assignments in the program of student observation and participation; independent study; advisory and consultative services; testing, psychological, and guidance services; participation in surveys; research and writing; student advisory duties; and recruitment, selection, and admission of students. The total load should not be excessive.

Instruction.--The institution will be expected to furnish evidence that instruction is evaluated systematically, based on the scholastic performance of its students within the institution and later as members of the teaching profession. Consideration will be given to such items as the performance of the students in standardized tests, the quality of their subsequent work in accredited graduate and professional institutions, and the degree to which the institution as a whole seems to be leading up to its goals in the preparation of professional teacher personnel.

The institution should show that it utilizes a variety of appropriate instructional procedures which contribute to the effectiveness of the student's preparation, such as class discussions, lectures, laboratory work, use of teacher aides, and newer media.

### Facilities and Instructional Materials

Buildings and Grounds.--A college should have a physical plant designed to serve effectually its defined purposes for teacher education. The educative value of the college environment should be used to the optimum. Grounds should be located and buildings designed so that they will not merely be adequate but will contribute the values of attractive and **cultural** surroundings. The physical facilities should also promote the safety, health, and recreation of students and faculty. Adequate facilities should be available for appropriate housing to enhance the morale and meet the social needs of the students.

Library.--The library, as the principal materials resource center of the institution, should be adequate for the instructional, research, and other services pertinent to its teacher education programs. Administrative procedures and equipment should conform to accepted modern practices, including cataloging methods, arrangement of books and magazines, and adequate hours of accessibility. Ample provision should be made for capitalizing on newer

developments in library services, including the use of electronic materials and equipment. Adequate space should be available. The library should be administered by a professionally trained librarian. The building or buildings should be well-lighted, protected against fire, and equipped with adequate working quarters for the staff and seating capacity to meet the study needs of the student body.

Laboratories.--Each institution should be provided with laboratory equipment sufficient for instructional purposes for each program offered, including suitable shops and shop equipment; specialized equipment for the biological and physical sciences; specialized equipment for psychological, sociological, and child-development sciences; gymnasiums for physical education; equipment for courses in commerce; suitable kitchens, dining rooms, and laboratories for household arts; and adequate farm buildings and demonstration farms for work in agriculture. Laboratory equipment should include audiovisual equipment and other teaching media which have become accepted essentials of modern teaching.

Curriculum Laboratories.--A materials laboratory or center should be maintained either as a part of the library or as one or more separate units. It should be open to students as a laboratory of materials of instruction and should be directed by a faculty member well-informed in the various instructional media and materials at different grade levels. This laboratory should include a wide array of books commonly used in elementary and secondary schools; various types of audiovisual aids such as maps, charts, pictures, filmstrips, and recordings; various types of materials used in evaluating learning; curriculum patterns, courses of study, and teaching units; and workshop facilities for preparing new curriculum materials.

Laboratory Schools.--Each college should establish a laboratory center or centers either as a part of the college administration or in cooperation with nearby public schools. These may be organized for professional laboratory experiences prior to student teaching. Schools selected for professional laboratory centers should provide experiences based upon principles of education, including child development, learning theory, curriculum research, and community relationships. Provision should be made for using such centers for extensive new research and experimentation by both students and faculty. Staff to direct such research should be provided. College and laboratory staff members should have communication lines established to insure coordination between theory and learning experiences.

Student teaching should be done through cooperative programs in selected schools having desirable curriculums, appropriate teaching materials, and professionally educated staff members with successful teaching experience. There should be provision for coordinated extensive supervision by college faculty, involving both subject and education areas, and for special preparation of both school and college supervisors.

The following chapter pertains to standards for the curriculum in teacher education.

## Chapter III

### CURRICULUM PRINCIPLES AND STANDARDS: UNDERGRADUATE PROGRAMS

The actual programs in teacher education are the crucial aspect of examination by State departments of education in determining accreditation or approval. General institutional adequacy can frequently be judged from more general departmental procedures and from cooperation with regional and national accrediting agencies. The specific supporting provisions for teacher education programs can and should be readily assessed.

In many approval processes too little attention has been given to the various curriculums. This chapter sets forth basic curriculum standards as applied to specific undergraduate programs. General statements and guidelines are presented first; specific program guidelines follow.

#### Introductory Statement

Curriculum Development and Planning.--Responsibilities for the administration of a continuing program of curriculum development, evaluation, and revision, and for the advisement and programming of students in the teacher education curriculums, should be centralized in a single designated administrative unit of the preparing institution. This unit should recommend students to the State agency for certification.

The process of curriculum development for the various teacher education programs should make provision for enlisting the cooperation and participation of representatives of 1) the public schools, 2) college teachers in fields related to the area of the public school specialization, 3) the State department of education, and 4) professional associations and appropriate committees and commissions.

A continuing program of curriculum evaluation should provide for thorough systematic followup of graduates to determine the adequacy of their preparation and their competence as public school teachers.

Curriculum Pattern.--Each curriculum for the preparation of teachers should be a program planned for teaching in the area of specialization and should include: 1) General education--those academic courses planned for all degree candidates--designed to prepare the student for purposeful and responsible living as an individual and a citizen in a free society; 2) appropriate content and experiences in his particular field of specialization to relate to and give background for his teaching service in public schools; and 3) the sequence in basic professional education designed to prepare the student for his role as a teacher in the public schools. The curriculum should be designed to

develop the student's unique interests and capabilities through a system of academic guidance and free electives.

### General Education

General education is based on those studies known as the liberal arts, which embrace the broad areas of the humanities, mathematics and the biological and physical sciences, and the social and behavioral sciences. The content of general education, selected with discrimination from the aggregate of human experience, should embody the major ideas and principles of the various divisions of knowledge as they bear on common concerns. More specifically, the general education program should:

1. Foster individual fulfillment and nurture free, rational, and responsible adults
2. Cultivate appreciation for the values associated with life in a free society and for wise use of the power which accompanies citizenship
3. Develop leaders who are intellectually competent, imaginative, and vigorous
4. Contribute fundamentally to and give direction to the use of professional knowledge
5. Stimulate scholarship that will give understanding to concepts not now extant and help prepare people for rapid adjustment to essential change
6. Encourage discernment in examining the values inherent in foreign cultures to the end that a clearer understanding of other peoples will reduce world tensions.

Because general education is a developmental experience achieved with the maturation of the college student, it should be emphasized in the first 2 college years, extend throughout the baccalaureate program, and continue in diminishing proportions into graduate study.

In the belief that a general education program relevant to the future is attained by a carefully selected sequence of courses which increase in depth as the student matures, each institution approved for the education of teachers shall be responsible for building a sequential program of general studies which will help the college student attain an understanding and appreciation of:

1. Language skills as essential tools in communication
2. World literature with emphasis on, but not limited to, the writings of English and American authors

3. The aesthetic values in human experience expressed through the fine arts

4. The scientific and mathematical concepts upon which contemporary civilization depends

5. Contemporary world culture

6. Social, geographic, political, and economic conditions and their impacts on current problems in the Nation and the world

7. The growth and development of the United States as a nation and its place in world affairs

8. The principles of physical and mental health as they apply to the individual and the community

9. American culture and heritage.

#### Professional Education

Planned Sequence of Studies.--The program of professional preparation for teaching should provide a sequence of studies planned to develop:

1. Knowledge of the processes of human growth, development, and learning, and the practical application of this knowledge to teaching

2. Knowledge of methods, materials, and media appropriate to teaching, with special emphasis upon the student's field of specialization

3. Ability to teach effectively and to work ethically and constructively with pupils, teachers, administrators, and parents

4. Understanding of the philosophical and sociological foundations underlying the development and organization of public education in the United States

5. Understanding of the purposes, administrative organizations, and operation of the total education program of the school.

It is desirable that members of the college faculty who teach the professional sequence shall have had public school teaching experience. It is essential that they have continuing working relationships with the schools.

Professional Experience Prior to Student Teaching.--The program of professional study in education should make provision throughout for observation and experience with school-age youth. Study of theory and practice should be closely related. The college schedule should be arranged to support this field-classroom approach to teacher education.

Student Teaching: Purposes.--Student teaching is both instructional and evaluative. Here the student's communicable knowledge, his commitment to teaching, and his skill in classroom management are developed and tested. Performance in student teaching should provide important evidence on which the college's decision to recommend the student for certification and employment is based.

Standards for Student Teaching Program.--In considering the approval of teacher education programs, the following statements should be used as a basis for evaluating student teaching. These statements are not all-inclusive. Higher institutions are encouraged to develop student teaching programs of a quality superior to that implied.

1. Admission to Student Teaching.--The student should be permitted to engage in student teaching only after an institutional review of his record indicates that his scholarship, performance in an area of specialization, competence in the professional sequence, and personal characteristics qualify him for the responsibilities of student teaching. The supervising teacher should be provided in advance with information about the student that is essential for adequate understanding and guidance.

2. Intensity.--Student teaching should be a full-time experience. It should begin with observation, involve expanding responsibilities, and finally include the full range of activities of a teacher in a typical school situation.

3. Length of Program.--A good student-teaching experience provides for intensive and continuous involvement. Regardless of the ability of the student teacher, his period of involvement should be long enough for him to observe evidence of change in patterns of learning and behavior on the part of his students. The length of student teaching should depend upon the performance of the student teacher, as determined by supervisory personnel.

4. The Cooperating School.--The cooperating school or school system should be chosen by the college because of the commitment of the administrators and staff members to participation in the preparation of new teachers and their willingness to supervise, and on the basis of the overall excellence of the school's instructional program and resources. The school selected should offer a range of experiences:

- a. At different levels within the various teaching fields
- b. With different groups and groupings of students
- c. With a range of instructive nonclassroom experiences, e.g., counseling, record keeping, extracurricular activities, preparation and selection of teaching materials.

5. The Cooperating Teacher.--Cooperating teachers should be selected jointly by school and college personnel on the basis of officially recognized State standards. In addition to being fully qualified in the area in which he accepts student teachers, the cooperating teacher should be experienced, have a good performance record, show continued professional growth, and have the temperament and desire to work with a student teacher.

Only one student teacher should be assigned to a cooperating teacher at any given time.

6. Supervision by the College.--Responsibility for the direction and coordination of all student teaching should be assigned to one administrative unit of the institution. Supervision should be done by full-time college faculty members with specializations appropriate to the area being supervised. There should be coordinated supervision by representatives of both the academic and education departments who are competent to teach the college's special methods instruction and are knowledgeable about the public school's philosophy and instructional program.

Each college supervisor's total college teaching assignment should provide the time necessary for frequent visits to each student teacher assigned to him and for regular conferences with the student teachers, their supervising teachers, and other appropriate school and college personnel. Each visit should be long enough to allow the college supervisor to judge the student teacher's effectiveness and communicate comments and suggestions.

A desirable load for the supervision of student teachers is one student teacher per semester hour of the teaching load. While this might be increased somewhat under special circumstances, it should never exceed the point of a double load.

#### Teaching Majors: General Guidelines

Institutional Responsibility.--Each institution is responsible for developing its teacher education program in the several teaching fields within the general policies relating to teacher education and certification of the State in which the institution is located. The organization should be such that those preparing to teach at various levels and in various subject areas will find it easy to associate with each other. In addition it should be easy for these students to understand where responsibilities lie.

Statement of Objectives.--Each teaching major or field of specialization should be built upon a clear-cut statement of the purposes and objectives of teaching in this area of the public school curriculum, and a well-formulated statement of the nature of the public school program that is needed to accomplish these objectives. These statements should be prepared by the college faculty concerned with teacher education, should be based on analyses of current practices and recommendations of the professional organizations representing this field of the public school curriculum, and should be available in writing.

Statement of Teacher Competencies.--Each teaching major or field of specialization should be built on a clearly formulated statement of the competencies needed by teachers in this area of the public school curriculum--including the attitudes, knowledges, understandings, and skills that are required, and the degree of expertness necessary for a beginning teacher. This statement of competencies should be available in writing, and should be based upon the statement developed in the preceding guideline regarding the objectives and program of the public school. No collegiate institution is expected to offer teacher education programs in all available areas of specialization. On the contrary, the institution is encouraged to expend its efforts only on those programs in which it can excel.

Characteristics of Teaching Majors.--Each teaching major or field of specialization should consist of a carefully planned pattern of courses and experiences designed to produce the competencies identified by the faculty in the preceding guideline as necessary for successful teaching in a particular area of the public school program. The program of study constituting the specialization should:

1. Include a thorough college-level study of the aspects of the subject-matter area as included in the public school curriculum.
2. Take into account, wherever relevant, the sequential nature of the knowledge and skills to be developed, so that there will be maximum continuity in the achievement of the objectives of the program.
3. Provide the prospective teacher with a comprehension of the aspects of the areas of study which his students who go on to advanced work in the field will meet in subsequent courses.
4. Constitute a teaching major in the field of specialization, with courses and content chosen for their relevance to the public school curriculum. The amount of work required in a teaching major will vary, depending on the scope of teaching for which graduates are prepared, the amount of work in the field that is included in the general education requirements for all students, and students' high school background in the field. Emphases may vary in response to the careful study of individual needs, abilities, and objectives. Unless otherwise indicated in the text, it is anticipated that teaching majors will constitute at least 30 semester hours.

5. Be broadly conceived, to include work in fields related to the area of study to be taught.

Evaluation and Recommendation of the Candidate.--Each teaching major or field of specialization should include provision for a systematic program of evaluation procedures to determine the degree of the student's attainment of teaching competencies and as the basis for recommending him for the appropriate teacher certificate.

Supporting Facilities and Schedule.--Each teaching major or field of specialization should be supported by plant, facilities, equipment, library, and audiovisual resources and a schedule of meeting-time adequate to implement the planned program of courses, including appropriate field and laboratory experiences.

Staff.--Each teaching major or field of specialization should be staffed by college faculty members who are master teachers, well-qualified by graduate training and experience in the subject-matter foundations of the particular area of the public school curriculum, and sensitive to the needs of public school teachers.

### Teaching Majors: Specific Guidelines

#### A. Elementary School Teaching

College programs for the preparation of elementary school teachers differ in structure, organization, and staff assignment. However organized, the requirements of the curriculum for elementary school teachers should provide for subject-matter preparation adequate in terms of the functional needs of elementary school teachers. 1/

Traditional academic majors in single "disciplines" alone are frequently too narrow to serve as the basis for specialized preparation of elementary school teachers. The content to be studied should provide preparation sufficient for a beginning competence in all of the subject-matter areas normally found in the elementary school curriculum. Specific provision should be made for the development of adequate academic background in each of the following subject areas:

1. English composition and language

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1/ The Standards and Guide, 1960, of the National Council for Accreditation of Teacher Education states: "The nature and amount of subject matter required in addition to general education will bear an obvious relationship to the grade level or subject field for which the student is preparing to work. It will not be assumed that a regular departmental major designed for other purposes will necessarily meet the subject-matter needs of teachers."

2. Literature, including works suitable for children
3. Speech improvement
4. Arts and crafts
5. Health and physical education
6. Mathematics 1/
7. Music
8. Sciences--biological, physical, earth, space 1/
9. Social studies, including at least world history, American history, geography, and American government, with study also urged in anthropology, economics, and sociology.

It is possible in a total program to provide preparation for teaching in a self-contained classroom and also to have sufficient upper-division work in one area of instruction to prepare for team teaching or other arrangements for teaching requiring some specialization. Some colleges will make specific provision for the development of a field of specialization in addition to the required background in elementary school subjects. Others will provide a sufficiently large block of electives so that the student may choose either to develop a subject major, or to acquire additional depth in several of the elementary school curriculum areas.

The specialized professional portion of the curriculum for the preparation of elementary school teachers should include specifically, in either separate or integrated courses, a study of the methods and materials of teaching each of the following elementary school curriculum areas:

1. Reading
2. Language arts, including children's literature and speech improvement in children

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1/ The publication Guidelines for Science and Mathematics in the Preparation Program of Elementary School Teachers is recommended for use in connection with approving teacher preparation programs in science and mathematics. This publication contains the guidelines and subject-matter content recommended for preparation of elementary teachers in science and mathematics.

A limited number of copies of the publication can be obtained from the NASDTEC-AAAS Studies, American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW, Washington, D. C. 20005, or from any office of the State Director of Teacher Education and Certification in the State Department of Education or Public Instruction in any of the several States.

3. Arts and crafts
4. Health and physical education
5. Mathematics
6. Music
7. Science
8. Social studies

The early elementary education program should be developed with the necessary modifications to insure professional study of and laboratory experiences with nursery school, kindergarten, and primary-aged children. Emphasis should be given to curriculum areas ascribed to early elementary education. Particular stress should be placed on language development, scientific and mathematical concepts, social sciences, and the creative arts.

#### B. Art Education

The program should include:

1. A study of the philosophy, principles, methods, and curriculum of the visual and tactile arts
2. A study of world art (past and present) with emphasis on the relationship of the art to the culture in which it was produced and its influence on subsequent cultures.

Art teachers should develop concepts of painting and drawing, modeling and carving, printing and the graphic arts, stitching and weaving, and building and construction. Design should be a part of concept development in each of the experiences in art.

Laboratory experiences should be provided and required in the following areas:

1. Drawing and painting
2. Graphics
3. Sculpture and three-dimensional construction, including architecture and interior design
4. Ceramics
5. Jewelry and metal work
6. Weaving
7. Display, including lettering.

Additional experiences should be provided in the related art forms of dance, music, drama, photography, architecture, and the industrial arts. These additional experiences, when provided, should be organized to develop concepts of the interrelatedness of the art forms and the basic concepts common to all forms of art.

#### C. Business Education

Preparation programs for all teachers of business education should include a wide representation of basic business studies such as business organization, banking and finance, insurance, business law, geography, economics, principles of marketing, advertising, and consumer education.

In addition to these basic studies, teachers preparing to teach secretarial science should also have demonstrated efficiency in typewriting, shorthand and transcription, and office practice (including filing and office machines). Standards should specify the degree of skill to be achieved in typewriting and shorthand and should require a planned program of evaluative procedures for measuring the degree of skill involved. The college should arrange for supervised practice experience in office work.

Teachers preparing to teach bookkeeping should have, in addition to the basic business studies, a program in accounting.

Some comprehensive programs will prepare students to teach all the business subjects, including general business, bookkeeping, and secretarial science. Other programs will prepare the student to teach in only one of these areas, or perhaps in two.

#### D. English 1/

Programs for the preparation of secondary school English teachers should include certain fundamental areas of study and opportunities for individual students to develop background in selected areas of emphasis.

Fundamental areas of study:

1. A fundamental knowledge of the historical development and present character of the English language: phonology (phonetics and phonemics), morphology, syntax, vocabulary (etymology and semantics), and metalinguistics (relations of language and society--for example, usage)

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<sup>1/</sup> A more extended statement, English Teacher Preparation Study: Guidelines for the Preparation of Teachers of English, 1967, prepared by the National Association of State Directors of Teacher Education and Certification, the National Council of Teachers of English, and the Modern Language Association of America, was printed in the English Journal, September 1967, Elementary English, October 1967, and College English, October 1967.

2. Advanced composition and provision for a considerable amount of writing throughout the college program

3. Literature, including a reading background of major works from literature; emphasis on English and American literature; familiarity with outstanding non-English works in English translation; contemporary literature; literature appropriate for adolescents, representing a variety of interests

4. Speech: work in speech development, oral expression, and the related development of listening skills.

Selected areas of emphasis:

1. Journalism, and the production of student publications
2. Dramatics, as experience in play production
3. Reading: instruction in developmental reading and the improvement of reading of students at the high school level
4. Debate and forensics
5. Work in related fields

#### E. Education of Exceptional Children

Teachers of exceptional children should have the skills, knowledge, and understandings needed for teachers of the normal child. The speech and hearing therapist is directly involved with speech disorders and does not have the responsibility for subject-matter instruction. He should have a knowledge of the goals and procedures of public education and an appropriate proportion of his practicum should be in the public schools. The subject-matter specialization in programs for all teachers of exceptional children should develop understanding of the total field of exceptional children, including 1) the types and nature of exceptionalities found among children and youth, 2) the school program provided for the education of exceptional children, and 3) community agencies and resources available for assistance to these children and their parents.

The program for each area of exceptionality should make provision for 1) the nature and needs of the area of exceptionality, including the physiological, psychological, emotional, communicative, and educational factors involved; 2) educational programs and procedures for the area of exceptionality, including student and parent counseling; and 3) student teaching or practicum experience with children of this exceptionality.

F. Modern Foreign Languages <sup>2/</sup>

The program 1/ to prepare a future teacher of a modern foreign language must provide him with the opportunity to develop:

1. Ability to understand conversation of normal tempo, lectures, and news broadcasts
2. Ability to talk with a native without making glaring mistakes, and with a command of vocabulary and syntax sufficient to express his thoughts in conversation at normal speed with reasonably good pronunciation
3. Ability to read with immediate comprehension prose and verse of average difficulty and mature content
4. Ability to write a simple "free composition" such as a letter with clarity and correctness in vocabulary idiom and syntax
5. Ability to apply to language teaching an understanding of the differences in the sound systems, forms, and structures of the foreign language and of English
6. Awareness of language as an essential element of culture and an understanding of the principal ways in which the foreign culture differs from our own; first-hand knowledge of some literary masterpieces and acquaintance with the geography, history, art, social customs, and contemporary civilization of the foreign people
7. Knowledge of the present-day objectives of the teaching of foreign languages as communication and an understanding of the methods and techniques for attaining these objectives; knowledge of the use of specialized techniques, such as newer media, and of the relation of language study to other areas of the curriculum; and ability to evaluate the professional literature of foreign language teaching.

The college should employ systematic evaluative procedures 1/ to determine the degree to which its students have approached the aforementioned objectives, as the bases for guidance and placement, graduation, and recommendation for certification.

A similar degree of competency and knowledge should be required for each major language, and for classical languages insofar as they are applicable.

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1/ Based on the "good" level of the "Qualifications for Secondary School Teachers of Modern Foreign Languages," The Bulletin of the National Association of Secondary School Principals, XXXIX (November 1955), as revised in Wilmarth H. Starr, "MLA Foreign Language Proficiency Tests for Teachers and Advanced Students," PMLA, September 1962, Part 2.

2/ A more extended statement, Guidelines for Teacher Education Programs in Modern Foreign Languages, adopted by NASDTEC and the Modern Language Association, may be found in Modern Language Journal, October 1966. Copies may be obtained from the Materials Center, MLA/ACTFL, 62-5<sup>th</sup> Avenue, New York, N. Y. 00011.

## G. Health Education

### 1. Subject-Matter Specialization for Teachers of Health Education

The specialization program for teachers of health education should include studies and experiences in the many subject-matter areas drawn upon in building a program of health education in the public schools. The teacher of health education needs understanding and appreciation of the conditions that contribute to making intelligent choices for a healthful way of life. Courses dealing with the biological, sociopsychological, physical, and aesthetic influences on health chosen or designed to meet the needs of health teachers may be offered or developed by various departments of the college or university. The following areas of study, specifically interpreted and related to health education, should be included in either separate or integrated courses:

a. Basic background studies in the biological sciences such as human biology, including anatomy, physiology, and kinesiology; bacteriology; genetics; and body chemistry

b. Basic background studies in the behavioral and social sciences, such as developmental psychology, constitutional psychology, social psychology, anthropology, and social pathology

c. Content courses in health, such as personal health, community health, and sanitation programs; nutrition; mental health; alcohol, tobacco, drugs, and social diseases; family living, including sex education; first aid; sight and hearing conservation; communicable diseases; health problems of school children; and home care of the sick.

### 2. The Specialized Professional Program for Teachers of Health Education

In addition to the basic professional program for all teachers, the program for teachers of health education should include specialized professional preparation in the following areas of study, in either separate or integrated courses:

a. Aims and objectives of health education in the elementary and secondary schools

b. Methods and curriculum planning in health education: selection and organization of learning experiences, specialized methods and materials in health education programs, evaluation in health education

c. The school health program: health instruction in elementary and secondary grades, health services, healthful school living, safety education, and relationships with community agencies

d. Health and learning: relationship of health conditions to the learning and development of both normal and exceptional children.

#### H. Health and Physical Education

##### 1. The Program of Subject-Matter Background Selected for Teachers of Health and Physical Education

The subject-matter major should include studies and experiences in the many subject-matter areas drawn upon in building a program in health and physical education in the public schools. Courses designed specifically to meet the needs of health and physical education teachers may be offered by various departments of the college or university. In some colleges, a portion of this basic study may be included as part of the student's general education program.

a. Basic background studies in the biological sciences, such as human biology, including anatomy, physiology, and kinesiology; bacteriology; genetics; and body chemistry

b. Basic background studies in the behavioral and social sciences, such as developmental psychology, constitutional psychology, social psychology, anthropology, and social pathology

c. Content courses in health, such as personal health, community health, and sanitation programs; nutrition; mental health; alcohol, tobacco, drugs, and social diseases; family living, including sex education; first aid; sight and hearing conservation; communicable diseases; health problems of school children; and home care of the sick

d. Studies and participation in physical activities, such as fundamental skills and exercises; gymnastics; aquatics; individual and dual sports; team sports and games; mass games and activities; rhythms and dance; camping and outdoor recreation.

##### 2. The Professional Program for Teachers of Health and Physical Education

In addition to the basic professional program for all teachers, health and physical education teachers should have a specialized professional program designed to develop the following understanding and skills:

a. Aims and objectives of health and physical education in elementary and secondary schools

b. Selection and organization of learning experiences, and specialized methods and materials in elementary and secondary school health and physical education programs

c. Objectives and methods of measurement and evaluation in health and physical education

d. The school health program, including health instruction, health services, and healthful school living.

e. Adapted physical education and medical liaison

f. Relationship of physical and health conditions to total student learning and development.

### I. Home Economics

The curriculum for the preparation of home economics teachers should develop an effective concern for the strengthening of family life. Although elective specialization is desirable, it is primarily important that programs have sufficient breadth and depth to develop functional competencies in the several areas involved. Home economics is not the only field dealing with certain aspects of family life, but it is the only field dealing with all of them and treating them in their practical relationships.

Programs in home economics teacher education should provide approximately equal emphasis in each of five areas:

1. Family relations: child development and child care; educating the individual for family living; and the family in the community and cultural setting

2. Nutrition and foods: selection, preservation, preparation, and utilization of food for the nutrition of individuals and families

3. Clothing and textiles: sociological and psychological factors involved in the selection and buying of clothing for the individual and family; with emphasis on wardrobe planning, consumer skills, fitting, care, basic construction of clothing for all family members, and textiles for the home

4. Housing, home furnishings, and equipment: selection, buying, and care of the home and its furnishings with emphasis on meeting the needs for shelter for the family

5. Home management and family economics: child care and the use of resources open to families to achieve individual and family goals at the various stages of the life cycle.

In the development of these areas, programs of home economics education should include substantial study in the humanities and the social, behavioral, and natural sciences.

Programs for the education of teachers of vocational home economics may provide specialized preparation for adult education and demonstration center programs through both course work and supervised experience.

#### J. Industrial Arts Education

Programs to prepare teachers of industrial arts should include a body of related courses or subject matter organized for carrying out learning experiences through the study of industry -- the origin and development of industry and technology; technical, organizational, consumer, occupational, recreational, social, and cultural aspects of industry and technology; and learning experiences involving activities such as experimentation, design, planning, construction, creation and operation of tools, materials, and processes.

The industrial arts teacher should be prepared 1) to serve a general industrial arts course offering instruction in at least five of the main divisions of industrial arts subject matter. and 2) to serve a general unit-type laboratory or shop in one of the main divisions of industrial arts subject matter.

More specifically, the industrial arts teacher education program should include:

1. Study of the philosophy, principles, and methods of industrial arts in elementary, secondary, adult, and collegiate schools

2. Fundamental knowledge of the historical development of technology and its impact on man and society

3. Technical competencies developed in at least five of the following divisions of industrial arts subject matter (a, b, d(3), d(6), and e):

- a. Drafting: learning activities concerned with communicating ideas or illustrations graphically by depicting them on a surface such as paper by means of a pencil, pen, or other marking instrument

- b. Electricity-electronics: study of technology involved in the industrial uses of electrical energy for operating electrically powered equipment and for operating various kinds of communications transmitting equipment, including the theory, applications, and control of electrical energy

- c. Graphic arts: learning experiences concerned with the tools, materials, and processes used in the printing industries. Instruction usually includes study of the technical aspects of printing, related occupations, management problems, and the consumer-printing industry relationships.

d. Manufacturing and construction industries: study of the technological achievements of man concerned with methods and processes used in creating structures and articles of value for mass consumption, including housing, waterworks, textiles, rubber products, chemicals, and cellulose

(1) Ceramics: learning experiences concerned with industry and the technology and products involved in the industrial and domestic uses of nonmetallic resources such as clay, sand, and glass

(2) Crafts: study of the handicraft industries, their organization and management, and the tools, materials, processes, products, and occupations involved in production

(3) Metals: subject-matter and learning activities concerned with a) the refinement, testing, and uses of metals, and b) metals-manufacturing industries and the technology involved in the production of metal products

(4) Plastics: subject-matter and learning activities concerned with the study of plastics industries, including the materials, processes, products, and technology involved

(5) Textiles: learning experiences which include subject matter and activities concerned with the textiles industries, types of technology involved in textile manufacturing, and textile products

(6) Woods: study of woods, including the various manufactured products, technology employed in manufactured products and in construction using woods, and related factors such as occupations, economics, and consumers

e. Power and transportation: study of the technology involved in harnessing and controlling power, including its source, generation, and transmission, and the use of powered devices and vehicles

f. Research and development: study of industrial problems, including provisions for teachers to make independent investigations of the origins and evolution of present industrial conditions. In addition, teachers will pursue research and make reports on experiments and engineering problems and their solutions, and design, construct, and test their individual projects.

#### K. School Librarian

Programs to prepare school librarians should include four areas: General education, subject-matter specialization, professional education, and specialized preparation for librarianship. This specialized preparation should be the equivalent of at least 1 year in duration. It should include study of the following areas, with undergraduate programs, where operative, emphasizing the first five:

1. Administration and organization of the library
2. Fundamentals of library service
3. Library materials and selection of materials
4. Reference materials and services
5. Cataloging, classification, and management of these operations
6. Relations with mass media and general public relations
7. Selection and supervision of personnel
8. Techniques of library service in the field of research
9. Expansion of kinds of library services, including extending use of television, microfilm, and other forms of electronics as may become appropriate for school library use
10. Development of inservice programs in library use.

L. Mathematics<sup>1/</sup>

Programs for the preparation of secondary school mathematics teachers should include provision for certain fundamental areas of study as outlined in Guidelines for the Preparation of Teachers of Secondary School Science and Mathematics produced by NASDTEC-AAAS. These are summarized below:

(a) The Mathematics program should include:

A thorough college level study of the aspects of the subject that are included in the high school curriculum.

Since much of the secondary school mathematics is devoted to algebra and geometry, the program should include college-level work in both areas. A course in modern algebra is essential. It should begin with the study of the structure of the number system and include treatments of algebraic systems,

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<sup>1/</sup> Copies of a more extended statement, Guidelines for Preparation Programs of Teachers of Secondary School Science and Mathematics, may be obtained from the NASDTEC-AAAS Studies, American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005, or from any office of the State Director of Teacher Education and Certification in the State Department of Education or Public Instruction in any of the several states.

such as groups, rings, and fields. Linear algebra, vectors and finite matrices should be included with some emphasis upon their geometric interpretation. As the content of this course is revealed to the prospective teacher, it is important to show him how it ties in with the high school program. He should be made aware of the structure of algebra and how from this structure one derives the manipulative techniques of algebra.

The preparation should include a critical study of the development of Euclidean geometry from various postulational systems. Euclidean geometry might comprise one-fourth of the geometry sequence, and most of the remainder of this sequence be devoted to one or more of the following topics:

- (1) The development of Euclidean geometry from synthetic projective geometry, or the generalization of Euclidean geometry to projective geometry.
- (2) Euclidean and analytic projective geometries, to be given after modern algebra course.
- (3) Euclidean and affine geometries.
- (4) Geometries other than Euclidean, such as geometry on the sphere, the non-Euclidean geometries, and finite geometries.

The program should take into account the sequential nature of the subject to be taught and should include the successive extension of the number concepts: positive integers, rational numbers, real numbers, complex numbers and linear vector spaces.

Since analytic geometry and calculus are the next area of mathematics studies by many high school students, the program should include these two areas. The analytic geometry which should be taken prior to or concurrent with the calculus should stress intuitive ideas and basic concepts as well as manipulative skills and should show the relations to natural and social sciences.

The program should include a major in the subject to be taught with courses chosen for their relevance to the high school curriculum. In addition to the above-mentioned algebra, geometry and calculus courses, the courses to complete the major or teaching major should include topics from probability, statistics, set theory and elementary logic. Additional courses in Matrix and Linear algebra, number theory, probability and analysis should be selected in the major and of sufficient advanced level to lead to graduate work.

The content of the major should include sufficient preparation for the later pursuit of graduate work in mathematics relevant to the teaching of mathematics in advanced standing programs; e.g., introductory courses in calculus, linear algebra, probability and statistics. The work comprising the major should not include courses such as solid geometry, advanced Euclidean geometry, theory of equations and mathematics of finance although topics from that might be found in other courses.

(b) Work in Areas Related to Mathematics:

The program should include work in areas related to the subject to be taught. The undergraduate requirement should include a course in physics and a course in another field in which mathematics is applied. When possible, the work in mathematics should be further supported by study in philosophy, logic, chemistry, astronomy, physics, biology, psychology, or economics. In each case, this study should be pursued to the extent that the student will have encountered substantial applications of mathematics.

(c) Curriculum Recommendations by National Groups:

The program of preparation for secondary school mathematics teachers should take into account the recommendations for curriculum improvement now being made by various national groups. The program should acquaint prospective mathematics teachers with the existence of new materials and continue to follow evolving curricula.

M. Music Education

1. Basic music includes subjects such as the following, sometimes taught separately and sometimes in combination courses which include several subjects:

- a. Music reading
- b. Ear training and diction (melodic, harmonic, and rhythmic)
- c. Keyboard harmony
- d. Harmony (part writing)
- e. Form and analysis
- f. Instrumental and/or vocal arranging
- g. Counterpoint
- h. Composition

The objective of these courses is to develop sound musicianship, with constant emphasis on the usefulness of this material in the classroom teaching situation. The use of various mediums of performance in addition to the piano is encouraged.

2. Musical performance including the following subject areas is recommended:

- a. Conducting. The student is to be trained to read and conduct from both choral and instrumental scores of suitable school music materials.

b. Ensemble. All music education students should participate in both large and small ensembles.

c. Functional piano facility. All music education majors should be expected to demonstrate piano facility, as follows:

(1) Ability to sight-read songs of the type found in a songbook

(2) Ability to harmonize at sight, improvising a simple piano accompaniment for songs requiring the use of I, IV, V, chords and some simple modulations, also to transpose the songs and harmonizations to other keys

(3) Ability to sight-read fairly fluently simple accompaniments, vocal or instrumental, and simple piano compositions of the type used for school rhythmic activities.

d. Major performance area. Each music education student should have one performance area in which he excels. The college should state the requirement in terms of musical and technical standards rather than credits or years of study.

e. Minor performance area. Every music education student, in addition to his major performance area, should have the equivalent of the following as a minimum requirement:

(1) One year of voice study

(2) One term or semester of a stringed instrument

and/or a teaching and basic performance ability on all stringed instruments

(3) One term or semester of a woodwind instrument and/or a teaching and basic performance ability on all woodwind instruments

(4) One term or semester of a brass instrument and/or a teaching and basic performance ability on all brass instruments

(5) One term or semester of percussion, emphasizing the fundamentals of the snare drum and/or a teaching and basic performance ability on all percussion instruments.

3. Music history and literature should be designed to provide acquaintance with much music within its historical framework; knowledge of the major periods of music history in terms of composers, philosophies, styles, and mediums; and the perceptive and analytical skills basic to high standards of artistic taste and judgment.

## N. Science<sup>1/</sup>

Programs for the preparation of secondary school science teachers should include provision for certain fundamental areas of study outlined in Guidelines for the Preparation of Teachers of Secondary School Science and Mathematics produced by NASDTEC-AAAS. These are summarized below.

It is not necessary that all colleges adopt a uniform pattern of organization for providing the subject-matter preparation for the science teacher. Some institutions with a divisional organization may offer a curriculum for the preparation of science teachers through a single division. Others, with a departmental pattern of organization, may offer individual teaching majors through separate science departments, such as physics, chemistry, biology, etc. Whatever the type of organization, the subject-matter portion of the teacher's preparation should constitute a pattern carefully planned in accordance with the following Guidelines:

- GUIDELINE I: The program should include a thorough, college-level study of the aspects of the subject that are included in the high school curriculum.
- GUIDELINE II: The program should take into account the sequential nature of the subject to be taught, and in particular should provide the prospective teacher with an understanding of the aspects of the subject which his students will meet in subsequent courses.
- GUIDELINE III: The program should include a major in the subject to be taught, with courses chosen for their relevance to the high school curriculum.
- GUIDELINE IV: The major should include sufficient preparation for the later pursuit of graduate work in one of the sciences or in mathematics.
- GUIDELINE V: A fifth-year program should emphasize courses in the subject to be taught.
- GUIDELINE VI: The program should include work in areas related to the subject to be taught.

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<sup>1/</sup> Copies of a more extended statement, Guidelines for Preparation Programs of Teachers of Secondary School Science and Mathematics, may be obtained from the NASDTEC-AAAS Studies, American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005, or from any office of the State Director of Teacher Education and Certification in the State Department of Education or Public Instruction in any of the several states.

GUIDELINE VII: The program should include preparation in the methods especially appropriate to the subject to be taught.

GUIDELINE VIII: The program should take into account the recommendations for curriculum improvement currently being made by various national groups.

1. Broad Background in the Sciences and Mathematics.

All science teachers should have a broad background in the sciences and mathematics, as well as specialization within the field of science.

2.1 Specialization within the Field of Science: BIOLOGY

(a) Essential biological concepts that should be included are:

- (1) The characteristics of living organisms;
- (2) The interrelationships of living organisms with their physical and biotic environments;
- (3) Significant emphasis on the plant, animal, and micro-biological sciences alike;
- (4) Strong emphasis on the actual living materials through laboratory and field experiences; and,
- (5) Emphasis on science (and biology as a science) as investigation and inquiry, especially through experimental methods.

(b) Advanced Work in Biology

Advanced courses in biology should be so selected as to maintain a broad knowledge of plants and animals alike, so selected as to avoid specialization in a particular area of biology or in a particular group of organisms. The essential point is study of basic processes as they appear in examples drawn from all three major organismal groups (microorganisms, plants, animals). With few exceptions, all of these courses should include laboratory work of an experimental kind as well as descriptive studies.

Any courses which are neither directly relevant to the high school program nor prepare for graduate study should be discouraged.

(c) Work in Areas Related to Biology.

To reach the desirable level of biological understanding, a prospective biology teacher needs a relatively large amount of work in related sciences. An understanding of the basic facts

and principles which govern the relationships of matter and energy is imperative. If the recent insights into life processes are to be introduced into the secondary school curriculum, an introduction to organic chemistry and biochemistry, some grasp of historical geology, some mathematics and some psychology are needed.

## 2.2 Specialization within the Field of Science: CHEMISTRY

### (a) Essential chemical concepts that should be included:

- (1) General Inorganic Chemistry: Composition and structure of matter, atomic and molecular theory, states and transitions of matter, stoichiometry, nature of solutions, periodic tables and relationships among the elements, rates and equilibrium, ionic equilibrium and properties of electrolytes oxidation-reduction and electro-chemistry, energy relationships, nuclear and radiochemistry, and a study of the inorganic chemistry of important elements.
- (2) Organic Chemistry: Important types of organic reactions interpreted in terms of bonding orbitals, kinetics, thermodynamics and spatial relationships; application of these principles to some processes and compounds of particular interest because of their theoretical, industrial, or biochemical importance.
- (3) Analytical Chemistry: Gravimetric, volumetric, and instrumental methods, their applications and limitations.
- (4) Physical Chemistry: Determination of precise physical properties and the application of these data to thermodynamics, kinetics, and structure.

### (b) Work in Areas Related to Chemistry.

Foundation training for teaching chemistry should include adequate basic study in physics, mathematics, and biology. Since both physical chemistry and a part of the physics study requires a working knowledge of calculus the requirement in mathematics should include this area.

## 2.3 Specialization within the Field of Science: PHYSICS

### (a) Essential physical concepts that should be included:

The specialized education of the physics teacher should consist of an intensive treatment of the fundamental or basic topics of physics rather than a random selection of courses, many of which might be only incidental to the high school curriculum.

A suggested group of courses would include:

- (1) A one-year basic course in college physics. This should be a course which pursues in depth the important and basic principles of physics. Problem solving and laboratory experience are important aspects of this course.
  - (2) Intermediate courses. The curriculum of the prospective high school physics teacher should include the subject matter of the following areas: physical mechanics, heat and thermodynamics, optics, electricity and magnetism, and electronics. Emphasis should be on a thorough quantitative treatment of a limited number of important topics in these areas of classical physics.
  - (3) Atomic and nuclear physics. Atomic and nuclear physics should be traced through study of the phenomena, concepts, and experiments that are important to the understanding and appreciation of these newer areas of physics.
- (b) Work in areas related to physics.

To acquire an adequate mastery of mathematics and breadth of understanding in the sciences, the prospective physics teacher will be required to include in his college program study in these areas: (1) General chemistry; (2) Mathematics including calculus and differential equations; (3) Principles of biology; and (4) Study in at least one of the following fields: geology, meteorology, physical geography, or astronomy.

#### 2.4 Specialization within the Field of Science: PHYSICAL SCIENCE

The physical science teacher is one who will teach primarily the physical science course in high school but who will be qualified also to teach either physics or chemistry or both. He should distribute his undergraduate work in physics and chemistry about equally between the two. Furthermore, a teacher of integrated courses in physical science will need to draw more of his teaching materials from other physical sciences, such as geology, astronomy, and meteorology, than will a teacher who teaches only physics or chemistry.

- (a) Essential physical science studies to be included:
- (1) The general principles of chemistry.
  - (2) Organic chemistry.
  - (3) Analytical chemistry.
  - (4) College physics.
  - (5) Intermediate courses in physics.
  - (6) Modern physics.

(b) Work in areas related to physical science.

A suggested group of courses would include: (1) three of four one-semester courses distributed among the following fields: geology, meteorology, physical geography, and astronomy, (2) mathematics, including calculus, (3) the principles of biology.

2.5 Specialization within the Field of Science: JUNIOR HIGH SCHOOL SCIENCE

(a) Essential science studies to be included:

The subject matter studies in science for the preparation of a teacher of science in grades 7, 8, and 9 should be divided about equally among biology, chemistry, earth science, and physics, except that there should be a concentration in one of these areas. In addition, the total preparation should include the mathematics training needed for a functional understanding of these science areas. The program should consider the sequential nature within, and the interrelationships among, the various science areas with courses chosen for their relevance to the junior high school curriculum.

(b) Work in areas related to junior high school science.

The broad preparation should stress the interrelationships among the sciences and include work in mathematics and in the history and philosophy of science.

2.6 Specialization within the Field of Science: EARTH AND SPACE SCIENCE

(a) Essential science studies to be included:

Earth and space science as taught in most schools includes the study of the solid earth, the atmosphere, the hydrosphere, and their relationship to the universe. Emphasis should be placed on the physical and biological aspects of the atmosphere, lithosphere, and hydrosphere and their interrelationship.

It is recommended where possible that a major in the broad field of the earth sciences be taken. Where such programs are not available, a major in one of the included sciences (astronomy, geology, meteorology, and oceanography) should be taken with supporting work in each of the other three. The major in earth science should be supported by a minor in either mathematics, biology, chemistry, or physics and should include as a supplementary requirement: mathematics through calculus, at least one year of chemistry, at least one year of physics, and one year of biology.

## 0. Social Studies

The curriculum for the preparation of social studies teachers has as its general objective the attainment of a broad understanding of human society and the environmental and cultural factors which shape and condition human life. Insight into the complexities of modern society requires knowledge and understanding of history, government, economics, sociology, cultural anthropology, and geography. The courses which comprise the social studies curriculum should make systematic and deliberate provision for content in each of the following:

1. History: Origin and historical development of various cultures throughout the world; interplay of physical, economic, political, and social forces in the shaping of world civilization; meaning of the American heritage; and the economic, political, and social background of contemporary American life in a world setting
2. Political Science: nature of government in modern society as a supplier of essential service, the embodiment of values, and the arbiter of interest conflicts; principles and practices of the national, State, and local units of American government as compared with other forms of government; and appreciation of democracy not only as a form of government, but also as a conviction based on moral principles and a philosophy of life
3. Economics: principles and processes underlying current problems and practices in various economic systems; application of social controls to economics; and the regulation of economic controls by government
4. Sociology and cultural anthropology: diverse behavior of peoples in different parts of the world and the influence of environmental factors on their cultural values; nature of great social upheavals now taking place in various parts of the world; and major social problems of American society such as those relating to minority groups, health and medical care, employment and industrial relations, crime, and delinquency
5. Geography: the earth's natural resources as a limiting and conditioning influence upon the development of human culture and as a source of political and economic power; more efficient use of natural resources on a global scale.

The social studies program as carried out in the different States usually follows one of two patterns. It may follow the subject-major pattern, emphasizing one or more areas of the social studies, supplemented by work in cognate areas. This prepares the student to teach the specified subjects in accordance with the limitation of the program completed. Or, the program may follow the comprehensive-major pattern, embracing a broad base of social science including history, sociology and cultural anthropology, government, economics, and geography, with a concentration in one field. This prepares the student to teach any of the social studies offered in the public school curriculum.

### Concluding Statement

The foregoing major-area standards are proposed as preliminary statements, looking to the development, in cooperation with other professional groups, of more detailed independent statements. Standards have not been included for programs to prepare teachers in such specialized fields as vocational agriculture, distributive education, and other typical vocational school areas. Until such standards are developed, it is recommended that the basic principles affecting other areas be applied to vocational areas as appropriate. Ultimately, it is anticipated that extensive guidelines comparable to those developed in the fields of mathematics and science through the NASDTEC-AAAS project, and that under way in English as a Cooperative Research project, will be developed in every field.

## Chapter IV

### CURRICULUM PRINCIPLES AND STANDARDS: GRADUATE PROGRAMS

This chapter deals with standards for the wide variety of programs of post-baccalaureate study, including 1) basic teacher preparation for college graduates and 2) advanced study for classroom teachers, administrators, supervisors, and other educational specialists. In reviewing such programs, the appropriateness and the quality of instruction of all courses, both academic and professional, are of concern.

#### General Guidelines

Responsibility.--Responsibility for assuring the quality of the various programs of advanced study in education within an institution should be centralized -- vested in a single specifically designated administrative unit. Although aspects of this responsibility may be shared with appropriate units or committees, top responsibility should be unified, specific, widely understood, and generally accessible. The assurance of the quality of programs is the essential value involved.

In consequence, the provisions for communication, cooperation, and even deliberate coordination should be abundantly clear in institutions operating several programs. Data should be available to indicate the objectives being served, the unique and cooperative program provisions, and the means of program evaluation. Furthermore, evidence concerning such evaluation should be accessible. Those institutions offering both graduate and undergraduate programs should maintain consistency in philosophy, principles, and objectives upon which teacher education programs are based.

The State legal agency is responsible for stimulating the development of objectives by all concerned, for developing legal policies, and for evolving and carrying out appropriate procedures for accrediting institutions and certifying teachers. The institutions, however, should be responsible for designing actual programs within the meaning and scope of such objectives and policies.

General Standards.--Certain general standards concern all kinds of programs beyond the baccalaureate for educational personnel and should include the following:

1. Clarity of objectives. Program objectives should be stated specifically, and an outline of each program should be published giving evidence of the program's provision for achieving its objectives. When two or more related kinds of student objectives are served within one broad program, the provisions for achieving each should be made clear.

2. Depth of study. Both specialization and advanced study require penetration beyond that achieved in general or undergraduate education. Consequently, program data should make clear the provisions for assuring scholarship in depth appropriate to the announced level of each program.

3. Breadth of scope. Programs should provide sufficient breadth of coverage to enable the student to develop supporting and related competencies and insights in addition to a major emphasis. Special justification should be required for programs in which less than one-third of the work is directed to developing such breadth.

4. Quality of scholarship. Each program should clearly provide for maintaining a quality of scholarship appropriate to the level of the program. If work of a normally undergraduate level is provided within an advanced study program, it should be so offered as to demand and utilize the advanced competence of students who have already undergone the discipline of a degree.

5. Adequacy of resource. Each advanced study and specialization program should be so backed by adequate resources of staff, equipment, special facilities, library, and general institutional support as to guarantee unquestioned quality in each program.

6. College schedule. The schedule of class meetings should provide blocks of time for the on-campus and off-campus experiences and activities needed to achieve the objectives of the program.

7. College-supervised experience. Curriculums designed for the development of initial competence in teaching or in an area of educational specialization should include a program of college-supervised practical experience in the functions for which the student is being prepared. This program should be designed both to develop competence and to serve as a basis for evaluating the student's proficiency and for recommending him for appropriate certification and/or a master's degree.

8. Adaptability of program to students. Each program should have sufficient flexibility to permit adaptation to the individual backgrounds and objectives of the students.

9. Institutional responsibility. Institutions should be responsible to the State certification agency for recommending their graduate students with reference to their special competencies in terms of specific program objectives.

Operating Controls.--The application of operating controls should be such as to guarantee the integrity of each program and should include the following:

1. An advisory system should be provided, because of the specialized nature of advanced study programs, the varied backgrounds of students, and the rapid growth of knowledge in many areas. This will help focus the strongest student potentialities and the best institutional resources on the advanced study sequences of individual students. Such provision is crucial for harmonizing flexibility and standards as well as breadth, depth, and quality.

2. Selective admission and retention procedures should operate to maintain a quality of students in each program appropriate to its objectives.

3. Student evaluation and degree requirements should support the admission and selective retention procedures in harmony with program objectives and over and above general institutional requirements.

4. Program evaluation procedures to assure continuing professional appraisal and improvement should be in operation.

5. Residence requirements should be stipulated and should be academically appropriate to the objectives of the programs in which they apply.

The internal provisions of each program should give evidence of its harmony with both objectives and prerequisites, to the effect that such prerequisites and program provisions together shall form a consistent and interrelated whole.

#### Specific Programs for Classroom Teaching

Programs for Qualified Teachers Advancing Those Same Qualifications.--These include mastery programs in elementary education for qualified elementary school teachers, in secondary education for secondary school teachers, or in a specific subject for teachers already qualified in that subject from kindergarten through grade 12.

1. Admission to such programs should be so stipulated that persons not qualified to pursue the advanced work with ready comprehension and profit could not be admitted without preliminary orientation. The emphasis, in both content and rigor, should be on advanced study.

2. Content should provide for greater breadth in the field, for the detailed study of one or more specialized aspects of the field, and for updating in terms of new research and developments. This applies whether programs are in subject fields, professional education, or both.

3. Learning procedures should be appropriate to the advanced competence of the students and to their growing orientation to the area of specialization.

Programs for Qualified Teachers Developing Different Qualifications.--These include programs to develop additional majors or other teaching specializations.

1. Admission requirements should be high enough to assure work at the level indicated but must also provide realistically for the change of objectives. Wherever possible, specific prerequisites consistent with the new objective should be maintained. For example, programs to prepare reading specialists should require normal undergraduate work in children's literature and the teaching of reading and remedial reading. Prerequisites taken without academic credit are sometimes acceptable.

2. Although content in the new field must obviously begin at the point previously achieved by the prerequisites, both content and procedure should be offered in accordance with the particular advanced level of the program.

3. Appropriate supervised experience or student teaching should be provided under the jurisdiction of the college or university.

Programs for Graduates of Programs Other Than in Education Seeking to Qualify for Education.--These include MAT-type programs and internships.

1. Admission to such programs should emphasize the scholarly and personality qualifications of college graduates seeking advanced standing toward teacher preparation.

2. Content and procedure should be offered at a consistently graduate level of quality, undergraduate credit applying to those portions of the program that cannot be so offered. All competencies normally developed in undergraduate preprofessional programs should be provided for either in the graduate program or in the combined undergraduate and graduate program. Provision should be made for individualization appropriate to varied student backgrounds. Appropriate student teaching or internship experiences under the supervision of preparing institutions should be provided, equivalent to or exceeding those normally required in undergraduate programs. Master's degree programs should be designed to deal with advanced material and to develop teacher competencies beyond those anticipated at the conclusion of a bachelor's degree program.

#### Specific Programs for Supervisory Specializations

Programs for Supervisors of Instruction.--These should include provision for developing:

1. Increased comprehension of principles and developments concerning the learner and the learning process and increased competence in applying such comprehension to the improvement of classroom teaching in the subjects involved

2. Increased competence in the subject to be supervised, with special attention to recent research and new developments

3. Comprehension of principles and developments in curriculum development and competence in such development, with emphasis on the subjects involved and their relationships to total curriculum

4. Understanding of school organization and operation with emphasis on the level(s) to be supervised

5. Comprehension of principles and developments in school supervision and competence in supervision with emphasis on the individual and group processes in the induction, assistance, supervision, and leadership of teachers with proper application to the subjects involved

6. Increased sensitivity to developments affecting the role of the school in our culture

7. Supervised experiences which provide opportunity for the student to:

a. Observe how school supervisors discharge their supervisory duties

b. Gain knowledge of the essentials in successful school supervision

c. Acquire theoretical understandings of successful school supervisory practices

d. Learn about school organization and essentials of coordination of the various aspects of the school program

e. Acquire supervisory competence through carefully assessed practice.

Programs for Principals.--These should include provision for developing:

1. Increased comprehension of principles and developments concerning the learner and the learning process and increased competence in applying such comprehension to the supervision of the school and to classroom teaching in the school at the level to be supervised

2. Increased familiarity with new developments in the subjects normally offered at the school level to be supervised.

3. Understanding of curriculum development and competence in its direction with emphasis upon effective evaluation of achievements

4. Comprehension of principles and developments in school organization and operation and competence in school operation with specific application to the level to be supervised and its relationship to the whole school system and to the public

5. Comprehension of principles and developments in school supervision and competence in supervision of both classroom teachers and subject supervisors, with special attention to recent research. Competencies should include assisting both new and experienced teachers, employing individual and group processes, and focusing on the learning process and the achievement of long-range objectives.

6. Increased sensitivity to developments affecting the role of the school in our culture

7. Supervised experiences which provide opportunity for the student to:

- a. Observe how the duties of a school principal are discharged
- b. Gain knowledge of the essentials of successful administration by a school principal
- c. Acquire theoretical understanding of successful school administration practices
- d. Learn important aspects of decision-making in matters related to the duties of a school principal
- e. Acquire the competencies of effective school administration through carefully assessed practice.

Programs for School Superintendents.--These should include provision for developing:

1. Increased comprehension of principles and developments concerning the learner and the learning process and increased competence in applying such comprehension to the opportunities and responsibilities of school administration

2. Increased familiarity with major new developments in the fields of knowledge affecting school curriculum

3. Increased understanding of curriculum development and competence in providing for it

4. Increased comprehension of principles and developments in school organization and operation

5. Increased comprehension of principles and developments in supervision of both teachers and supervisory staff within the school system

6. Comprehension of principles and developments in such specialized administrative responsibilities as school board relationships, matters of school law, school finance, program and plant development, personnel responsibilities, and public relations

7. Experience in both the performance and the interpretation of research with specific applications to school programs and school administration

8. Increased comprehension of principles and developments affecting the role of the school in our culture with broad consideration of implications as seen from such viewpoints as those of psychology, biology, sociology, cultural anthropology, economics, political science, and philosophy

9. Supervised experiences which provide opportunity for the student to:

- a. Observe how administrative duties are discharged
- b. Gain knowledge of the essentials in successful school administration
- c. Acquire theoretical understandings of successful school administrative practices
- d. Learn important aspects of decision-making in school administration
- e. Acquire the competencies of the effective school superintendent through carefully assessed practice.

In view of the scope and depth of advanced study required to meet these standards, the 2-year program for the school superintendent is supported.

#### Specific Programs for Service Specializations

Programs for Guidance Counselors.--These should include provision for developing:

1. Increased comprehension of principles and developments concerning the learner and the learning process
2. Understanding of curriculum development, supervision, and school administration
3. Increased sensitivity to developments affecting the role of the school in our culture and comprehension of principles and developments concerning the role of counseling and the counselor
4. Comprehension of principles and developments in, and specific competence in:

- a. Psychological assessment
- b. Counseling
- c. Group processes
- d. Personal, social, educational, and vocational planning and development
- e. Administration of counseling programs
- f. Faculty and public relations

5. Experience in both the performance and the interpretation of research, with specific application to educational adjustment and school counseling

6. Supervised experiences which provide opportunity for the student to:

- a. Observe how the duties of a guidance counselor are discharged
- b. Gain further knowledge of individuals, curriculum, and other essentials in a successful guidance program
- c. Acquire theoretical understandings of school guidance programs
- d. Learn important aspects of relationships with other teachers and with parents
- e. Acquire counselor competencies through carefully assessed practice.

Programs for School Psychologists.--These should include provision for developing:

- 1. Increased familiarity with the major new developments in the field of knowledge affecting the school curriculum
- 2. Increased comprehension of principles and developments concerning the learner and the learning process, with specific application to the school situation
- 3. Increased sensitivity to developments affecting the role of the school in our culture and of special services in the schools
- 4. Increased familiarity with curriculum development and educational supervision

5. Comprehension of principles and developments in, and specific competence in:

a. Group and individual psychological assessment, methods, and techniques

b. Child and parent counseling

c. Group processes

d. Deviation and problem solution

e. Staff cooperation and communication

6. Experience in both the performance and the interpretation of research, with specific application to educational adjustment and realistic school situations

7. Supervised experiences which provide opportunity for the student to:

a. Observe how school psychologists' duties are discharged

b. Gain knowledge of the essentials in implementing a successful program of psychological services

c. Acquire theoretical understandings of related information essential in a successful program of school psychological services

d. Learn important relationships to other aspects of the school program, including organization of program and relationships with parents

e. Acquire the requisite competencies of the effective school psychologist through carefully assessed practice.

Programs for School Social Workers.--These should include provision for developing:

1. Increased familiarity with current developments in the field of knowledge affecting the school curriculum

2. Increased comprehension of principles and developments concerning the learner and the learning process

3. Increased comprehension of principles and developments concerning the role of the school in our culture

4. Increased familiarity with curriculum development and educational supervision

5. Comprehension of principles and developments affecting the role of the school social worker as well as specific competence in the requirements of that role, with appropriate attention to:

- a. Psychological assessment
- b. Counseling and consultation
- c. Social case work
- d. Family problems
- e. Staff cooperation and communication
- f. Community resources and social work agencies

6. Experience in both the performance and the interpretation of research, with specific application to community, family, and pupil problems as confronted by the school social worker

7. Supervised experiences which provide opportunity for the student to:

- a. Observe how school social workers discharge their duties
- b. Gain knowledge of the essentials in conducting a successful school social work program
- c. Acquire theoretical understandings of successful school social work programs
- d. Learn important aspects of relationships with parents and of the school organization
- e. Acquire the requisite competencies of the effective school social worker through carefully assessed practice.

In many institutions the achievement of these standards will involve cooperative study in both the graduate program in education and the graduate program in social work.

Programs for Other Educational Specialists.--For other graduate programs principles similar to those set forth above should be applied. In general this means:

1. Increased familiarity with the major developments in the fields of knowledge concerned
2. Increased comprehension of principles and developments concerning the learner and the learning process, with specific application to the specialty involved

3. Increased sensitivity to developments affecting the role of the school in our culture

4. Understanding of curriculum development, supervision, and school administration with particular reference to the specialty involved

5. Comprehension of principles and developments affecting the specialty and competence in the professional discharge of its responsibilities including such aspects as:

- a. Role and concepts
- b. Special techniques
- c. Organization and administration
- d. Cooperative relationships

6. Supervised experiences which provide opportunity for the student to:

- a. Observe how the duties of such specialists are discharged
- b. Gain knowledge of the essentials in successful promotion of the particular specialization under consideration
- c. Acquire theoretical understanding of successful practices in the specialization under study
- d. Learn important aspects of the school program related to the particular specialization
- e. Acquire the requisite competencies through carefully assessed practice.

## A P P E N D I X

### NATIONAL ASSOCIATION OF STATE DIRECTORS OF TEACHER EDUCATION AND CERTIFICATION

#### RECOMMENDED PROCEDURES FOR THE DEVELOPMENT OF STATE LISTS

#### of Teacher Education Programs Approved As Meeting NASDTEC Standards For Purposes of Interstate Certification

July 1967, Revised

For purposes of interstate certification, it is agreed to develop state lists of college programs that essentially meet the standards set forth in Proposed Standards for State Approval of Teacher Education, U.S. Department of Health, Education, and Welfare, 1966, which is a revision of Proposed Minimum Standards for State Approval of Teacher Preparing Institutions, OE Circular No. 351, 1952. This document will be referred to in these procedures as the Standards. The following procedures will be used:

1. Criteria. Decisions to list each program as approved should be made in terms of the criteria stated in the Standards. The mathematics and science guidelines to be used will be the inserts to the Standards, attached, representing basic standards extracted from "Guidelines for Preparation Programs of Teachers of Secondary School Science and Mathematics" (NASDTEC-AAAS).

States having other criteria for college accreditation or program approval may wish to continue to use these. In such cases, existing guidelines or standards should be compared with the Standards, and a supplementary checklist developed to include the additional criteria unique to the Standards.

2. Institutional Self-Analysis. As a part of the process of evaluation, the institution will analyze its own programs and determine whether the provisions of the Standards are met. NASDTEC analysis sheets may be used for this purpose. If the institution has already made a self-analysis report to the state based upon other state-approved standards, a supplementary statement should be requested regarding any provisions of the Standards not already covered in other state reports.
3. Visiting Teams. For purposes of interstate certification, a curriculum may be included on the list of programs approved as meeting the Standards only on the basis of an on-the-site visit to the institution by a visiting team representing the State Department of Education.

The visiting team may include personnel from the state education agency, from colleges and universities which prepare teachers, and from public schools, or it may be a team from another accrediting body acceptable to the state education agency. In any case, the team should be as broadly representative as possible.

The visiting team shall review the institution's self-analysis, make its own analysis, and submit a report to the state education agency or to a review committee established by the state education agency, regarding the status of the institution's teacher education programs in terms of the application of the Standards.

Institutions and programs may be included on the list of those which meet the Standards to a satisfactory degree for purposes of interstate certification by the state education agency only, i.e., the final judgment is made by that agency.

4. Recommendations for Interstate Certification. The list of approved programs for purposes of interstate certification shall include at this time only the undergraduate teaching majors listed in Chapter III of the Standards for which specific guidelines have been developed, omitting the Education of Exceptional Children. The list shall indicate whether the institution as a whole is regionally accredited, accredited by NCATE, and whether the specific programs have satisfactorily met the Standards. NASDTEC report forms should be used for ease in interpretation and use.
5. NASDTEC Standards Review Committee. A Standards Review Committee of the National Association of State Directors of Teacher Education and Certification shall have the functions of registering all submitted state lists, providing advisory interpretations of the text of the Standards, proposing the application of these procedures to other areas of teacher education, arranging for periodic reviews, modifications, and reissuances of the Standards, and keeping NASDTEC members informed of new developments in subject matters fields as they relate to guidelines for programs.

The Standards Review Committee shall consist of six members of NASDTEC selected by the executive committee for overlapping three-year terms. The committee shall meet at least once a year and submit reports to NASDTEC annual meetings, along with any recommendations for changes in standards or procedures which must be voted upon by NASDTEC as a whole.