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The introduction to this proposal reviews background conditions and describes the systems analysis procedures used in developing the preservice-inservice education model based on teacher performance behaviors and job analyses. Most of the report consists of the four groups of specifications, each group preceded by rationale and methodology: (1) specifications concerned with the selection of candidates for the program, including procedural processes, measurement instruments, and suggested norms; (2) teacher performance specifications (statements describing a particular competency a teacher should possess for optimum effectiveness in a teaching-learning situation), each classified according to the highest level of learning necessary for the positions of teaching assistant, teacher, and specialist; (3) specifications for evaluation of the total program, including data obtained in selection, training, followup, and cost effectiveness efforts; (4) specifications for conditions essential to the implementation of the program, including instructional sequence, methods of content selection and presentation, organization and administration, utilization of staff and laboratory facilities, and inservice training of college personnel. Appended are the primary sources from which specifications were drawn: job descriptions, educational viewpoint, and elementary school objectives. (SP 002 138 is a summary of this report, and ED 018 677 summarizes the nine models.) (JS)

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FINAL REPORT

Project No. 8-9024
Contract No. OEC-0-8-089024-3311 (010)

GEORGIA EDUCATIONAL MODEL SPECIFICATIONS FOR THE PREPARATION OF ELEMENTARY TEACHERS

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PREFACE

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ACKNOWLEDGEMENTS

The core staff of GEM, which was responsible for the production of this report, has regarded itself as a team of coordinators whose primary function was to use specialists and laymen from various fields of endeavor to implement the network of events contained in the original proposal. Thus, much of the work which led to the completion of this project was the effort of many unnamed persons, both staff members and members of the Executive Committee. To name each person who participated in the development of this model program would provide a list too extensive to include in this document. Therefore, this acknowledgement is directed to the various institutions and organizations which provided time, effort, and facilities as they were needed for successful implementation of the system.

Within the College of Education of the University of Georgia every department, sub-unit, and special committee contributed staff time, effort, and facilities to assist this project to its successful completion. Among the units of the University of Georgia outside of the College of Education which are entitled to special acknowledgement are the College of Arts and Sciences, the School of Home Economics, the Computer Center, the Center for Continuing Education, the Educational Television unit, and the University Library.

Other resources in the State of Georgia which gave time to the project were the Regents of the University System of Georgia, the Georgia State Department of Education, the Georgia Teacher Education Council, the Georgia Education Association, the Georgia Teacher and Education Association, and the Georgia Congress of Parents and Teachers. Also, participating were a number of outstanding universities, state colleges, junior colleges, and public school systems. In addition, numbers of nationally known specialists were consulted from time to time as the project progressed.

SUMMARY

The Georgia Educational Model program for teacher education, (one of nine development projects funded by the Research Branch--USOE) has developed a model for the training of elementary teachers (preservice and inservice). Teacher performance behaviors and a teacher job analysis provide the foundation on which the model is built, and system analysis was the technique utilized for the program.

The rationale for the development of the model is based on the hypothesis that an effective teacher education program is built upon the job which the teacher performs. Determining what the teacher does required the sequential development of goals, objectives, and pupil learning behaviors for the elementary school. Pupil learning behaviors provided a primary basis for ascertaining teacher teaching behaviors and, consequently, a teacher job analysis. Finally, teacher performance specifications were developed that provide the objective and content for the teacher education program.

The products of the project include, in addition to the teacher performance specifications, specifications for the selection of candidates for the program; for evaluation of the total program; and for implementation of a program based on the teacher performance specifications.

PART ONE

INTRODUCTION

This document reports one of nine federally supported investigations designed to provide the specifications for a comprehensive model program for the preservice and inservice education of elementary teachers. It reviews the conditions which led to the investigation, describes the system used in carrying it out, outlines the educational viewpoint which served as the rationale, sets forth the detailed specifications for the model program.

The systems analysis procedures used in developing the model program are likely to be regarded as unconventional by many professional educators who for years have employed other approaches to curriculum development. The systems analysis procedures were prescribed in the original request for a proposal by the United States Office of Education. Many of the system procedures have proven not only successful but also necessary in major program development and evaluation efforts.

It is believed by the program directors that as the approach becomes better known and more widely used in the educational world that it will prove itself effective in program development.

Request for Proposals Number OE-68-4

In the fall 1967, the United States Office of Education (USOE) published Request for Proposals Number OE-68-4 (USOE, 1967) which called for educational specifications for a comprehensive undergraduate and inservice teacher education program for elementary teachers. It was widely distributed throughout the United States to educational agencies concerned with the preservice and inservice education of elementary school teachers.

The purpose for this action taken by the USOE is evident in the following statement contained in the Request for Proposals document (USOE, 1967):

> Because of the key role that the teacher plays in facilitating learning, particularly with young children, he/she must have the most up-to-date theoretical and substantive knowledge and professional skills to perform successfully. To date, research and development activities have generated new knowledge, materials, and methodologies with great potential for improving the effectiveness and efficiency of the teacher-learning process. If funds are made available, institutions should be able at this time to completely restructure their teacher education programs to include the best of what is now known and available.
>
> What is clearly needed at the outset is a variety of sets of detailed educational specifications which can be used as guides in developing sound teacher education programs. Such model specifications would encompass all aspects of a program for training teachers--administration, instruction, materials, equipment, and staffing; thus it would be possible for institutions to select and make use of the specifications in developing and implementing significantly improved programs for training teachers (p. 1).

The deadline for the submission of proposals was January 1, 1968, by which time approximately ninety proposals, including that from the College of Education, University of Georgia, were in the hands of the USOE for processing. On March 1, 1968, it was announced that nine had been approved and funded.

The Georgia Proposal

The proposal submitted by the University of Georgia, College of Education was entitled The Georgia Plan for Developing a Model System of Teacher Education--Elementary, (Johnson, 1967). Its goal was, "to produce teachers with the common characteristics of optimum effectiveness," (p. 5) and its objective was to describe "a system which if implemented would over a period of seven months produce documents containing the specifications for one model of a comprehensive undergraduate and inservice teacher education program for elementary teachers" (p. 1). When the proposed project was approved and funded its system designed to provide the promised products was immediately initiated.

Georgia Educational Models

The research and development organization which carried out the project proposed in The Georgia Plan for Developing a Model System of Teacher Education--Elementary was Georgia Educational Models. This organization was directly supervised by the Dean of the College of Education.

The core staff of GEM, which regarded itself as a team of coordinators, included eight professors drawn from various units of the University of Georgia including Early Childhood and Elementary Education, Educational Psychology, Home Economics, Evaluation, Curriculum and Teaching, and the Research and Development Center in Educational Stimulation. This core staff was augmented by six research assistants regarded by the core staff as qualified for the work required by the project.

The Executive Committee was composed of eight outstanding educational specialists at the University of Georgia. These professors were selected from departments of the College of Education, the School of Home Economics, the College of Arts and Sciences, and the Research and Development Center in Educational Stimulation. It was the function of each of the members of the Executive Committee to provide guidance in their individual fields of specialization.

The Advisory Board was composed of representatives from the University of Georgia, the State of Georgia, and the nation. Advisory Board members for the University of Georgia included staff members representing specialties in each of the various divisions and departments of the College of Education, plus specialists from such units as the Division of Audio-Visual Education, University of Georgia Computer Center, the Division of Educational Laboratory Experiences, and the Georgia Center for Continuing Education. Among the resources of the State of Georgia which were represented in the Advisory Board were the State of Georgia Department of Education, the Regents of the University System of Georgia, the Georgia Teacher Education Council, the Georgia Congress of Parents and Teachers, Inc., the Georgia Educational Television Network, the Georgia Teachers and Education Association, the Georgia Education Association, and selected public school districts. In addition, recognized specialists from various parts of the nation served from time to time as consultants to the staff.

The Products--Specifications

The products of this project are detailed specifications for a comprehensive undergraduate and inservice educational program for elementary teachers. These specifications are provided in four classifications: Specifications for the Selection of Candidates for the Model Program, Specifications for Teacher Performance, Specifications for Program Evaluation, and Specifications for Implementation.

The procedure used to obtain the specifications required considerable preliminary investigation. This preliminary work provided working papers, many of which are produced in bulletins.

Procedure

The procedure used for developing specifications was a modification of the systems analysis approach. In general the work began with the identification of an educational viewpoint including not only an interrelated system of educational principles, but an accepted list of goals for the elementary school along with their related objectives. Next, the specific learning behaviors which teachers are to create in pupils in order for them to achieve the objectives were determined. From these the numerous specific teaching behaviors which teachers must perform in order to create the desired changes in pupils were identified. The teachers' behaviors along with other data formed the foundation for the job analysis which in turn was used to develop the specifications.

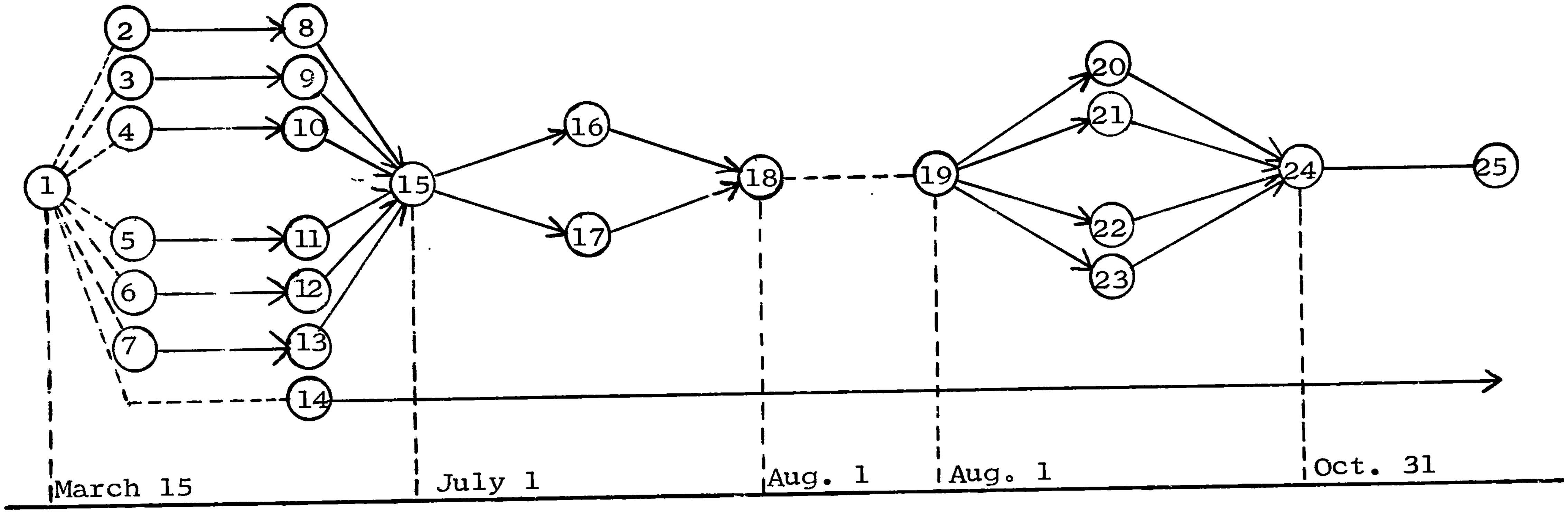
The Systems Network

A summary network (see Figure 1) depicts each event and its relationship to other events. In addition to the summary network, a time line shows the schedule of events as they occurred. The events shown here are for development only. Another similar network should eventually be constructed to depict each event for the implementation phase.

The network is composed of events and activities. An event represents the initiation or completion of an activity and is shown in a circle. For example, event number 1 represents the start of the program and is so indicated in the event identification. An activity consumes time and resources in proceeding from one event to another. An activity is indicated by an arrow. For example, the arrow connecting events 2 and 8 represents the activity required in defining goals.

The summary network presented in Figure 1 proceeds from the start of the system on the left side, event 1, through the start of the implementation phase in event 25. In the network there are a number of modal points, for example, event 18 is "completed behaviors." The investigation of behaviors had to be completed prior to starting the specifications, event 19. As indicated in the network, activities in proceeding from event 2 to 8, 3 to 9, 4 to 10, 5 to 11, 6 to 12, and 7 to 13, all occurred concurrently. However, there were interdependencies such as the objectives of event 9 supporting the goals of event 8.

The initial effort included a refinement of the goals and objectives for the program and an initiation of the sociological survey, resources search, learner definition, and the use of recommended listings of goals, objectives, and behaviors by relevant professional societies.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March 15
July 1
Aug. 1
Aug. 1
Oct. 31

1 Start program
2 Start goals
3 Start objectives
4 Start sociological survey
5 Start resources search
6 Start learner characteristics
7 Start material survey
8 Goals defined
9 Objectives established
10 Sociological survey completed
11 Resources identified
12 Learners defined
13 Material characteristics defined
14 Start public relations
15 Start behavior identification
16 Start teacher behaviors
17 Start children behaviors
18 Behaviors completed
19 Start specifications
20 Start selection specs
21 Start instructional specs
22 Start material specs
23 Start evaluation specs
24 Specs and model completed
25 Start implementation

Figure I-1

Summary Network for Teacher Education System

Major emphasis was first given to the goals and objectives so that the other efforts could be directed toward these goals and objectives.

The introductory or exploratory effort required several concurrent investigations. The sociological survey was conducted to define the limits of the unique factors related to the school program, such as the economic, health, and technological aspects. Available resources were searched for information upon which to envision an improved elementary education program. The resources included relevant library literature and the knowledge and experience of authorities. Recommended educational practices and available financing for an improved elementary school program were also considered. The nature of the learner was defined in terms of his knowledge, experience, skills, attitudes, and health. Categories of students represented in the national community were defined. Reports and recommendations of various professional societies on teaching techniques, sequences, and student experiences were collected for reference purposes. The exploratory effort was completed by July 1, 1968, and provided an essential basis for identifying the elementary pupil and teacher behaviors.

Behavior identification procedures began on July 1, 1968. Behaviors of the pupils were found necessary to completely and accurately define those necessary for the teacher. It was also found that the teacher must know and be capable of performing certain of the pupil behaviors in order to properly teach the students. The criteria used in selecting the behaviors were those of supporting the defined objectives, satisfying the social requirements, conforming with the nature of the learner, and compatability with the available resources. The synthesis of the behaviors was completed on August 1, 1968, from which the job analysis for elementary school instructional personnel was developed.

The Flow of Information

The summary network (see Figure 1) identified the sequence of events in relation to time. The flow of information in relation to the concerns of the project was another important procedural element (see Figure 2).

Since major concern of the project in its initial phase was to prepare job analysis of the elementary teacher, all preliminary activities were focused in this direction. The requirements of society and knowledge from various resources and materials contributed to the determination of the goals of the elementary school. These goals in turn serve as bases for determining the objectives. Yet, the selection of the objectives was also affected by the recommendations of professional societies and what was known of the effectiveness of educational technology. Once the elementary school objectives were determined, pupil learning behaviors which would guide children in acquiring characteristics represented by these objectives could be identified. From these teacher teaching behaviors, the core for the job analysis, could be formulated. However, the task of job analysis was not complete until consideration was given to that which could be gleaned from observations of the teacher on-the-job, and knowledge from professional education focused at teacher performance. Throughout the entire flow, but especially in relation to the primary focus of this project in its initial stages (the job analysis), knowledge of the individual child as a learner was a constant factor for consideration.

The development of specifications for the preservice teacher education program is the principal end product of the project (see Figure 3). The job analysis had provided information concerning what knowledges, thought processes, skills, and attitudes a teacher must possess in order to perform effectively. Now attention was given to the kinds of students who were available for admission to the profession. A weighing of what was needed against what was available provided a plan for selection procedures for the preservice student. It was not until information from these two sources was available that the kind of teacher education program needed became evident and could be developed. Once the teacher education program was clearly in mind it was possible to plan for the follow-up or evaluation. These four operations all yielded specifications. From the job analysis were the specifications for teacher performance, from the selection

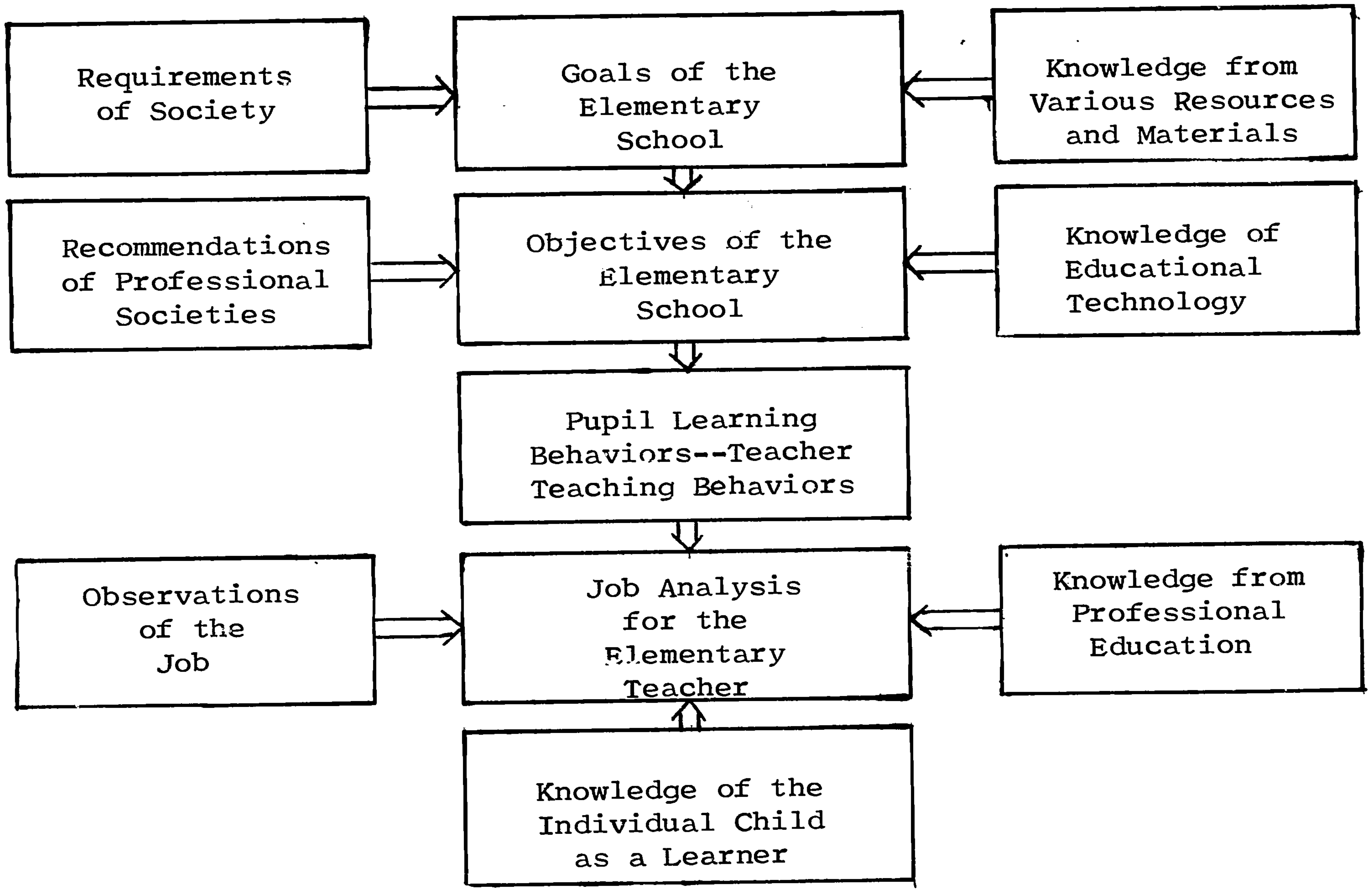

Requirements of Society
Goals of the Elementary School
Knowledge from Various Resources and Materials
Recommendations of Professional Societies
Objectives of the Elementary School
Knowledge of Educational Technology
Pupil Learning Behaviors--Teacher Teaching Behaviors
Observations of the Job
Job Analysis for the Elementary Teacher
Knowledge from Professional Education
Knowledge of the Individual Child as a Learner

Figure I-2

Information Flow Chart for Job Analysis

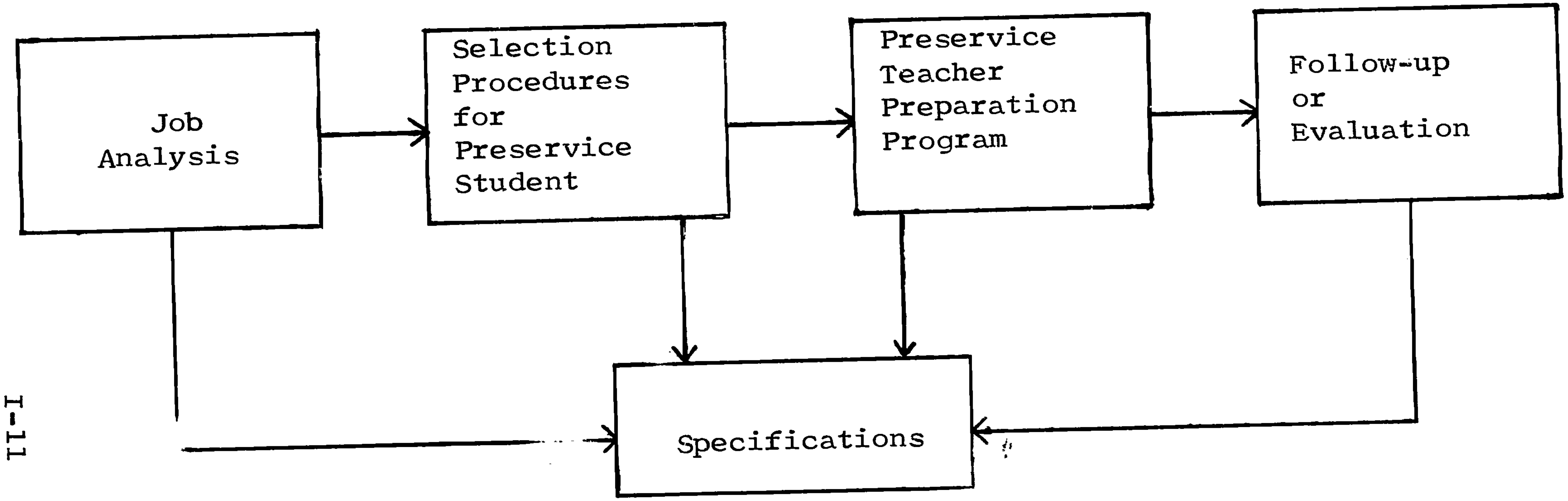

Job
Analysis
Selection
Procedures
for
Preservice
Student
Preservice
Teacher
Preparation
Program
Follow-up
or
Evaluation
Specifications

Figure I-3

Information Flow Chart for Preservice Program procedures were specifications for student selection, from the preservice teacher education program were specifications for all aspects of the program from the organization of content to the administrative organization, and from the evaluation plans were specifications for the follow-up program which would provide a longitudinal evaluation of individual teachers as well as the total program.

The development of specifications for the inservice teacher education program followed a flow of information similar to that for the preservice program (see Figure 4). The beginning was the accumulation of the elements for the job analysis. The next concern was for the nature of the knowledge, thought processes, skills, and attitudes which teachers already possessed. The elements of the job analysis were weighed with the characteristics teachers already possessed and the difference formed the foundation for the development of the inservice program. Once the inservice educational program was in mind it was possible to plan the follow-up or evaluation. These four operations all yielded specifications in the same way they did in the flow of information for the preservice program.

Definitions of Terms

Initial planning seminars involving the core staff of GEM revealed that because of their diverse professional backgrounds, individuals often failed to communicate adequately because particular terms were variously interpreted. Thus, it became necessary early in the investigation to define frequently used terms.

Definitions of Directional Terms

As was illustrated in the description of procedures, a preliminary step toward developing the specifications for a model teacher education program was the preparation of statements which described that which was to be achieved. There are numerous terms used in professional education to name these statements which give direction; the whole class of terms will be referred to here as

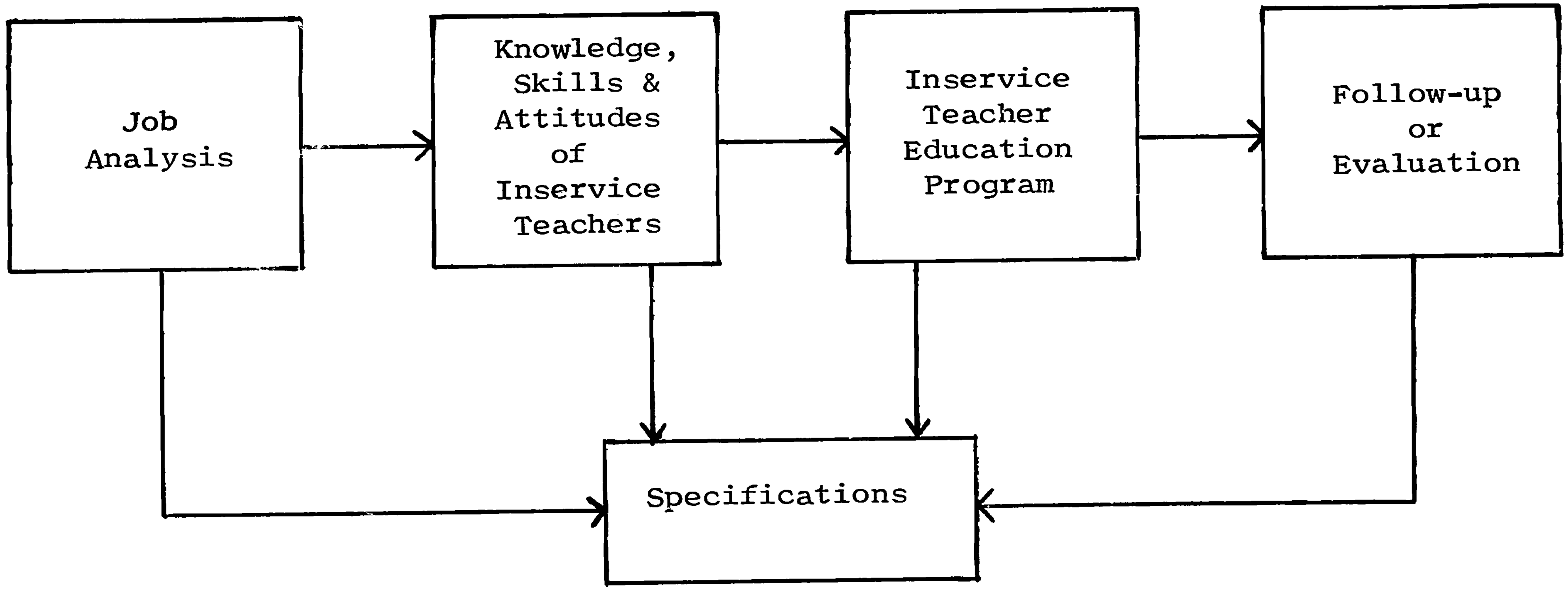

Job Analysis
Knowledge, Skills & Attitudes of Inservice Teachers
Inservice Teacher Education Program
Follow-up or Evaluation
Specifications

Figure I-4

Information Flow Chart for Inservice Program directional terms, and include: goals, objectives, behaviors, and purposes.

Review of educational literature failed to provide clear and concise definitions of directional terms. Illustrations of aims taken from one work were sometimes identical to goals or objectives from others. Because in this project directional terms were regarded as fundamental to the operation, it was necessary to define clearly what the investigators would regard as appropriate definitions for these terms insofar as this project is concerned.

Goals. Among directional terms, goals are regarded as the broadest in scope. They are far-reaching, abstract generalizations which have their origin in the hopes, aspirations, values, social realities, philosophical orientation, and historical referents of the society. They are expressed by school board members, state legislators, federal officials, learned groups, and lay organizations and tell what these various groups believe the schools should strive to achieve with all pupils. They represent ideal conditions which would provide the "good life," but as with all ideals, because of the dynamics of society and the nature and conditions of man, it is more realistic to regard them as the stars toward which we strive, rather than conditions we can reasonably expect to achieve in this generation.

The goals for a comprehensive elementary school program which were used in this project in formulating the educational viewpoint underlying its system are contained in Appendix B.

Objectives. Educational objectives are statements which interpret goals into the school setting. They are determined by professional educators, scholars from the academic disciplines, and child development and learning specialists. They express what the school makes available to its students in the form of content (subject matter, thought processes, skills, and/or attitudes). They are regarded as attainable when full consideration is given to relevant pupil characteristics. To be valid and useful, objectives should be supported with empirical evidence that their attainment will eventually lead in the direction of the goals, and they should be so stated that they can be reduced to behavioral terms. Appendix C provides lists of the elementary school objectives which served as one of the sources from which the specifications were eventually drawn.

Behaviors. Behaviors, sometimes called action patterns, are statements which describe observable characteristics. They are frequently used for the purpose of evaluating, or determining the extent to which a learner has attained prescribed objectives. As such they may be called performance behaviors. On the other hand, they may be used to describe learning or teaching patterns of action. In this latter case they may be referred to as learning behaviors or teaching behaviors.

Behaviors are determined by educational specialists who are thoroughly familiar with both the area of learning and with the characteristics of the learner. They are based on the assumption that the learner can demonstrate through his performance that he has acquired the prescribed element of knowledge, thought process, skill or attitude. To be both valid and useful, behaviors must be directly related to objectives and be so stated as to describe in detail observable aspects of patterns of action.

Some examples of statements of behavior are: "The child writes his name correctly in manuscript form." and "The pupil spells ninety percent of the words in the level four list correctly."

Purposes. A statement of purpose provides a rationale. It answers the question, "Why?"

Usually the infinitive of a verb is the starting point in formulating purposes. For example, if a professional worker is asked the purpose of undertaking lesson A, or utilizing materials B or in exercising method C, his immediate response is likely to begin with such statements as, "to teach...", "to guide the pupils in acquiring..." or "to strive toward the goal of...".

Since all directional terms suggest a rationale for professional action or concern, all may, if the occasion demands, be stated as purposes. For example, should the goal read, "The protection of health." it may be translated into a purpose by, "One of the major purposes of education is to teach each person to protect his own health and that of others." or simply, "To teach health protection." Similarly, objectives and behaviors may be translated into purposes when there is need to do so.

Definitions of Other Technical Terms

Throughout this report a number of technical terms other than those defined under Definitions of Directional Terms are used. Definitions of these terms as they are used in this report are presented here to assist the reader.

Specification. A statement of a requirement to be satisfied as a significant aspect of the educational model.

Principle. A generalization which is used as a basis for taking action or making a judgement concerning an action.

Elementary school. An institution which is concerned primarily with the education of children from three through twelve years of age.

Area of learning. Any defined set of learnings. May be a conventional elementary school subject, or a classified collection of subject matter, thought processes, skills, and/or attitudes.

Instruction. The act of attempting to change the learner's behavior in the direction of preselected objectives.

Individual instruction. The procedure of instructing one pupil apart from a group of pupils.

Group instruction. The procedure of instructing two or more pupils in a group at the same time. May or may not be individualized.

Individualized instruction. Instruction based on the principle that all individuals differ from others in numerous characteristics related to learning, and that for effective learning these differences must be recognized, and accounted for in all aspects of instruction. May be either individual instruction or group instruction.

Continuous instruction. Instruction based on the principle that for every area of learning there is at least one continuum which represents a progression from little or no acquaintance with the area of learning to a defined condition of knowledge, skill and/or attitude, and that each point on that continuum represents readiness for the next defined point on the progression.

Teachers' aide. A person whose function is to perform routine and other paraprofessional activities in the classroom.

Teaching assistant. A person who has the competencies of a teacher aide and in addition has completed the equivilant of an associate of arts degree, has a basic knowledge of human development, and has met requirements for admission to the professional program for general elementary teachers.

General elementary teacher. A professionally prepared person regarded as competent to assume the responsibilities for the general instruction of children primarily within the age range of 3 years through 12 years, or any defined age group within this total chronological age range. By general is meant that the person possesses paraprofessional knowledge and skills for working with children within the defined age range plus professional competency to guide children in acquiring new learnings in all areas of content normally presented within the elementary school range.

Specialist elementary teacher. A professional worker who possesses all of the qualifications of a general elementary teacher but is also prepared with additional professional and supervisory competencies either in a particular subject area of professional service such as curriculum, educational media, human development, and learning, evaluation, pupil personnel (guidance), professional development and school community relations.

Proficiency module (PM). A published guide which is designed to direct individual student learning behavior in studying a particular subject, area of learning, or topic, or in undertaking particular activities in a laboratory.

Teaching area of competency. A grouping of content (see definition of content) classified under a subject heading commonly used for the organization of learnings in the elementary school curriculum in which a general elementary teacher has more knowledge, understanding, and skill than in others. Also, a prerequisite for admission to the specialist program.

Preservice model program. The segment of the total model program which provides the students with competencies for paraprofessional service as an assistant teacher in the elementary school, the associate's degree, and the prerequisites for admission to the professional program.

Professional model program. A segment of the total model program which follows the preprofessional program and provides the student with competency for professional service as a general elementary teacher, the bachelor's degree, and with the opportunity to complete the prerequisites for admission to the specialist's program.

Specialist's model program. The segment of the complete model program which provides the teacher with competency for professional service as a specialist in elementary education, and the specialist's degree. The speciality may be in the teaching of any subject commonly taught in the elementary school sequence or in elementary education services such as pupil personnel, curriculum, school community relations, evaluations, human development and learning, educational media, and professional development.

General education. Sometimes called a liberal education. A composite of those learnings which prepare the student as an adult to better understand and adjust to his social and physical environment, and to meet his obligations as a member of society. It is assumed that this composite of learnings is basic to effective instruction in the elementary school.

Professional education. A composite of subject matter, thought processes, skills, and attitudes which prepare the student with the competencies needed for teaching.

Health education. Includes content traditionally assigned to such areas of learning referred to as health, safety, recreation, and physical education.

Content. Sometimes referred to as performance behaviors, learnings, or curriculum content. It consists of the definitions, facts, concepts, thought processes, motor skills, and attitudes to be acquired by the student through the instructional program. It is broadly inclusive of the elements which represent the cognitive, psycho-motor, and affective domains of educational objectives.

Director. An educator with professional rank who is administratively in charge of a functioning unit of an organization.

Manager. A person who is competent in management (but is not a professional educator) whose administrative function within a unit of an organization is to facilitate the work of the professional educator.

Learning laboratory. A location with sufficient space and facilities to provide the tools for learning needed by students as they pursue particular modules of study. These facilities include such items as textbooks, film strips, films, computer programs, and stations, taped lectures, TV recordings, scientific equipment, musical instruments, art tools and supplies, and language laboratory equipment. Separate learning laboratories may be provided for such areas as language arts, biological sciences, physical sciences, human development, speech, music, art, and foreign language.

Clinic. An organization designed to provide special help for students who share difficulties in pursuing particular modules of learning. Clinics may or may not be allocated special space and facilities. For example, a speech clinic may require space and technical equipment whereas one in English composition would not.

Practical laboratory. An educational setting in which instruction is being implemented where the prospective teacher carries on learning tasks. Example: An elementary school classroom, the playground, a testing room, or a gymnasium where teachers are guiding children in activities associated with learning.

Internship. A comprehensive on-the-job practical laboratory experience for prospective teachers during which the prospective teacher not only continues to acquire professional characteristics but is expected to demonstrate his competency for full professional responsibilities.

Target age group. A defined but limited age range which is the focus of professional concern of a prospective teacher. Examples: Early childhood, middle childhood, infancy, primary level, intermediate level.

Guidelines and Criteria Used in the Investigation

The conditions of the contract which led to this investigation were defined in RFP OE-68-4 (USOE, 1967). These conditions set certain expectations and limitations for both procedures and products. They were translated into procedural guidelines and product criteria and are summarized here as they were viewed by the staff in carrying out the operation.

Procedural Guidelines

1. A system designed to produce the specifications for a model teacher education program for elementary teachers should be composed of many interrelated subsystems, each with its own flow charts, and a PERT chart sequentially relating the subsystems at appropriate points indicated by specific dates.

2. There must be a theoretical foundation to justify the formulation, selection or rejection of any specification. These theoretical foundations should evolve primarily out of research findings, and generally accepted hypotheses where research findings are not conclusive.

3. Specifications should be determined in direct relationship to those specific teaching behaviors and other teacher characteristics which research indicates are most likely to effect optimum student learning.

4. To determine which teaching behaviors are most effective in promoting optimum student learning, the behaviors to be learned by the student must be described.

5. There are available lists of goals and objectives for elementary education which may serve as sources from which the desired end products in terms of pupil and teacher behaviors may be determined.

6. There are elements of comprehensive educational programs which may be judged to be effective in producing the desired behaviors once these behaviors have been defined.

7. There are products of modern technology which are potentially applicable in comprehensive educational programs and should be investigated.

Product Criteria

1. The specifications should provide one model of a comprehensive undergraduate and inservice teacher education program for elementary teachers.

2. They should be stated in sufficient detail to enable their ready development into an operating program with full implementation by the University of Georgia, as well as by other institutions or coalitions of institutions that educate relatively large numbers (approximately 100 or more) of teachers each year.

3. They should regard the elementary school as an institution concerned primarily with the education of children ages three through twelve years of age.

4. They should provide for both the professional and the general education of the elementary teacher.

5. They should encompass all aspects of a program for training teachers, including administration, instruction, materials, equipment, and staffing.

6. They should provide for practices for selecting teacher trainees for the program.

7. They should provide for the relationship of professional sequence (not necessarily courses) to the entire teacher training program.

8. They should provide for the types of content, experiences, materials, and methods to be used. (They should not provide the actual content, experiences, materials, and methods since these will be provided in the implementation phase.)

9. They should provide for faculty requirements and staff utilization pattern as well as inservice training program for college staff.

10. They should provide for evaluation and feedback techniques to be used throughout, and at the end of the program to determine to what extent trainees have acquired the essential teaching behaviors.

11. They should provide for continually and systematically assessing, revising, and updating the program.

12. They should provide for a multipurpose management and evaluation system, with data storage and rapid retrieval capabilities, to permit continuous diagnosis of student progress and frequent restructuring of the trainee's learning experiences.

Organization of this Report

The remainder of this report is devoted primarily to the presentation of specifications for a model program for the education of preservice and inservice teachers. However, each part which presents specifications is prefixed by a discussion of the rationale underlying the specifications and the procedures used in developing them. Part Two is concerned with specifications for the selection of candidates for the model program; Part Three with teacher performance specifications; Part Four with specifications for program evaluation; and Part Five with specifications for the organization and implementation of the model program.

In the appendix the reader will find job descriptions for elementary school instructional personnel, a statement of the educational viewpoint of GEM which served as a fundamental point of departure for all of its work, and a listing of the elementary school objectives which were one of the primary sources from which the specifications were eventually drawn.

References

Johnson, C. E. (Initiator). The Georgia plan for developing a model system of teacher education--elementary. A proposal to the U. S. Office of Education. College of Education, University of Georgia, Athens, Georgia, 1967.

U. S. Office of Education. Request for proposal Number OE-68-4. Washington, D. C., 1967.

PART TWO

SPECIFICATIONS FOR SELECTION

Part Two of this report presents specifications concerned with the selection of candidates for the Georgia Educational Model. Procedural processes, measurement instruments, and suggested norms are set forth in the specifications.

Rationale and Procedures

Teacher Pool

Development of selection specifications began with an investigation of the teacher personnel pool. At the present time there is a continuing flow of teachers both into and out of the profession. The estimated flow of elementary school teachers for the school years of 1968-69, and 1969-70, is depicted in Figure II-1: a reproduction of Figure 18 in the U. S. Office of Education, Department of Health, Education and Welfare Report #OE-10055 entitled Student-Teacher Population Growth Model (Zabrowski, 1968).

In Figure II-1, it is estimated that the attrition from elementary teaching due to all causes is approximately 8.1%, the entries from elementary teacher education programs is 5.3%, and the entry from all other sources is 6.2%. Although the total entries exceed the attrition, only 46% of these entries are specifically prepared for the elementary teaching position.

During the period of 1963-1967, the Educational Testing Service conducted a large scale investigation concerning the question of the qualification of personnel in the teaching profession. Figure II-2 presents information from this study relative to those students seeking admission to graduate school.

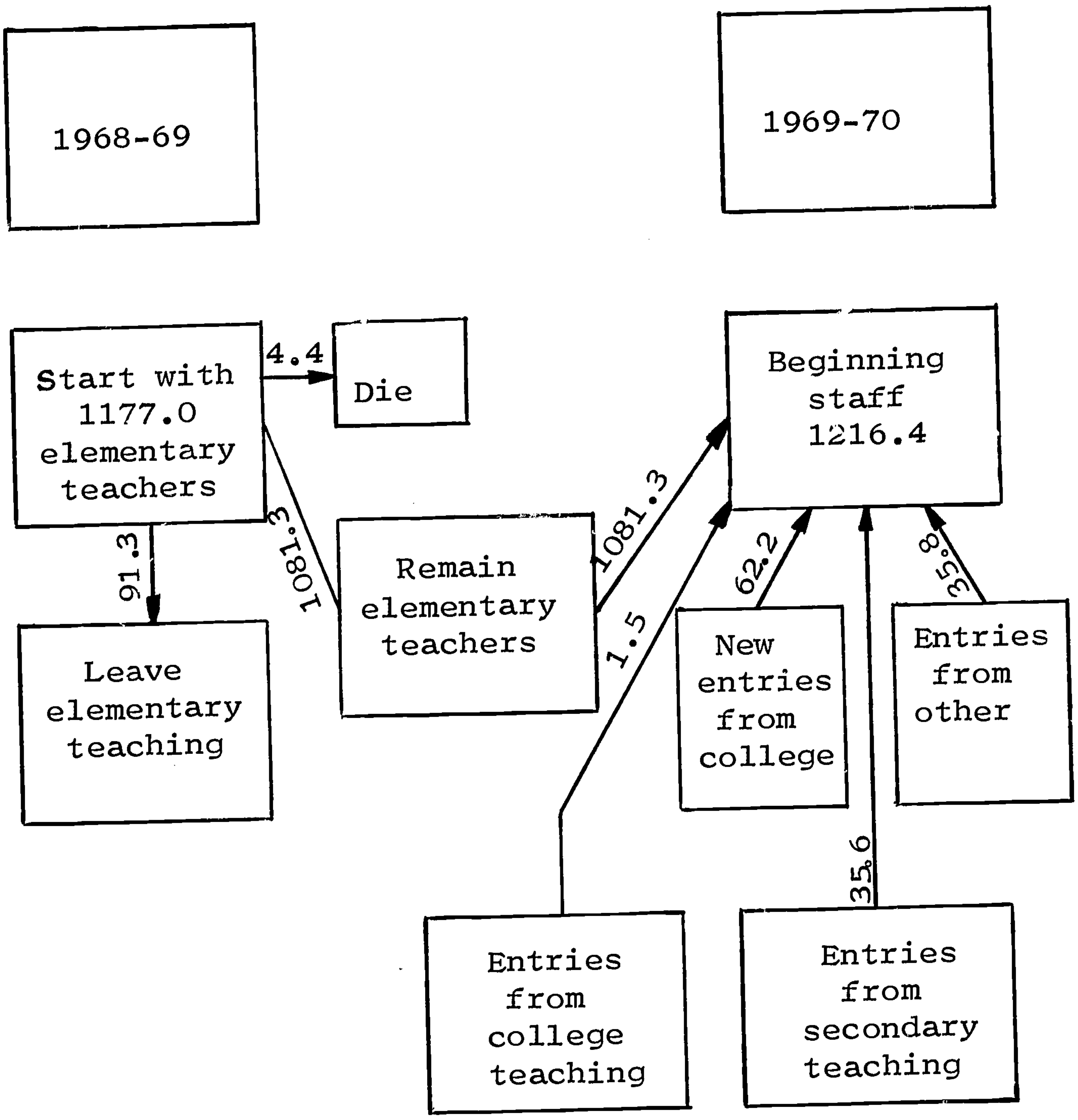

1968-69
1969-70
Start with 1177.0 elementary teachers
4.4
Die
91.3
Leave elementary teaching
1081.3
Remain elementary teachers
1081.3
Beginning staff 1216.4
1.5
62.2
New entries from college
35.8
Entries from other
35.6
Entries from college teaching
Entries from secondary teaching

Figure II-1

Estimates (in Thousands) of the Flows of Elementary School Teachers, 1968-69 to 1969-70

Major Field	Qualitative*	Quanitative*	Percent**	Salary***
Business	461	515	45	7812
Chemical Eng.	524	695	22	9480
Humanities	609	530	5	7512
Mathematics	559	668	13	8736
Physics	589	695	8	8736
Education	448	427	50	5222****

* Reproduced through the courtesy of the Educational Testing Service.

** Percent of teachers exceeding the mean score for given field assuming normality of distribution.

*** Mean starting salaries reported by The College Placement Council, Bethelehem, Pa.

**** Median salary reported by National Education Association for beginning teachers 1966-67.

Figure II-2

Comparison of Mean Scores on the Graduate Record Examination for Graduate School Candidates by Major Field of Study and Beginning Salaries

Conclusions derived from Figure II-2 indicate that the qualitative and quanitative abilities as well as the salaries for teachers are low. Based on both the attrition rate of teachers and the results of the above study, GEM has taken the position, that it is necessary to:

1. Increase the pool of teacher candidates.

2. Increase the input of qualified teachers.

3. Develop a teacher career field.

4. Provide appropriate categories for all entry personnel.

5. Increase standards for elementary teachers (as soon as supply satisfies demand).

Job Analysis

GEM's effort to define the job of the teacher began with the establishment of goals and objectives for the elementary school (see Appendix B). From these, pupil learning behaviors and teacher teaching behaviors were derived. Teacher teaching behaviors were categorized into paraprofessional tasks and professional tasks. An examination of these tasks revealed that different competencies were required and these differences led to job classifications.

Career Development

Both the teacher pool and the analysis of the job of the teacher suggested the need for a career development sequence for teachers. Consequently, GEM's position is that such a pattern would necessitate four categories of teaching personnel: aide, teaching assistant, teacher with an area of competence, and a specialist. A description of each job is contained in Appendix A.

In order to increase the input of personnel into the teaching profession, multi-entry points and paths are provided. Figure II-3 depicts some possible entry points in the teacher career field. Traditionally, the route to teaching has been that the student graduates directly from high school and then goes through college and directly into teaching. This path will be maintained and, hopefully, improved in this model. However, GEM proposes as an alternative that a student be allowed to enter teaching directly from high school as an apprentice, attend college on a part-time basis, advance to teaching assistant, become a teacher, and finally move toward a specialist. A third route is for non-education majors to enter as a teaching assistant and complete their professional training. It is estimated that the second and third routes can contain 30% of the students and that 10% will complete the program each year. This would yield a 3% annual increase over current growth in the teaching field.

Selection to the Model Program

Graduates of high schools are considered for admission into the model teacher education program. The graduate submits an application letter and requests that a certified copy of his high school record be sent to the admissions office. The letter and records are reviewed by a member

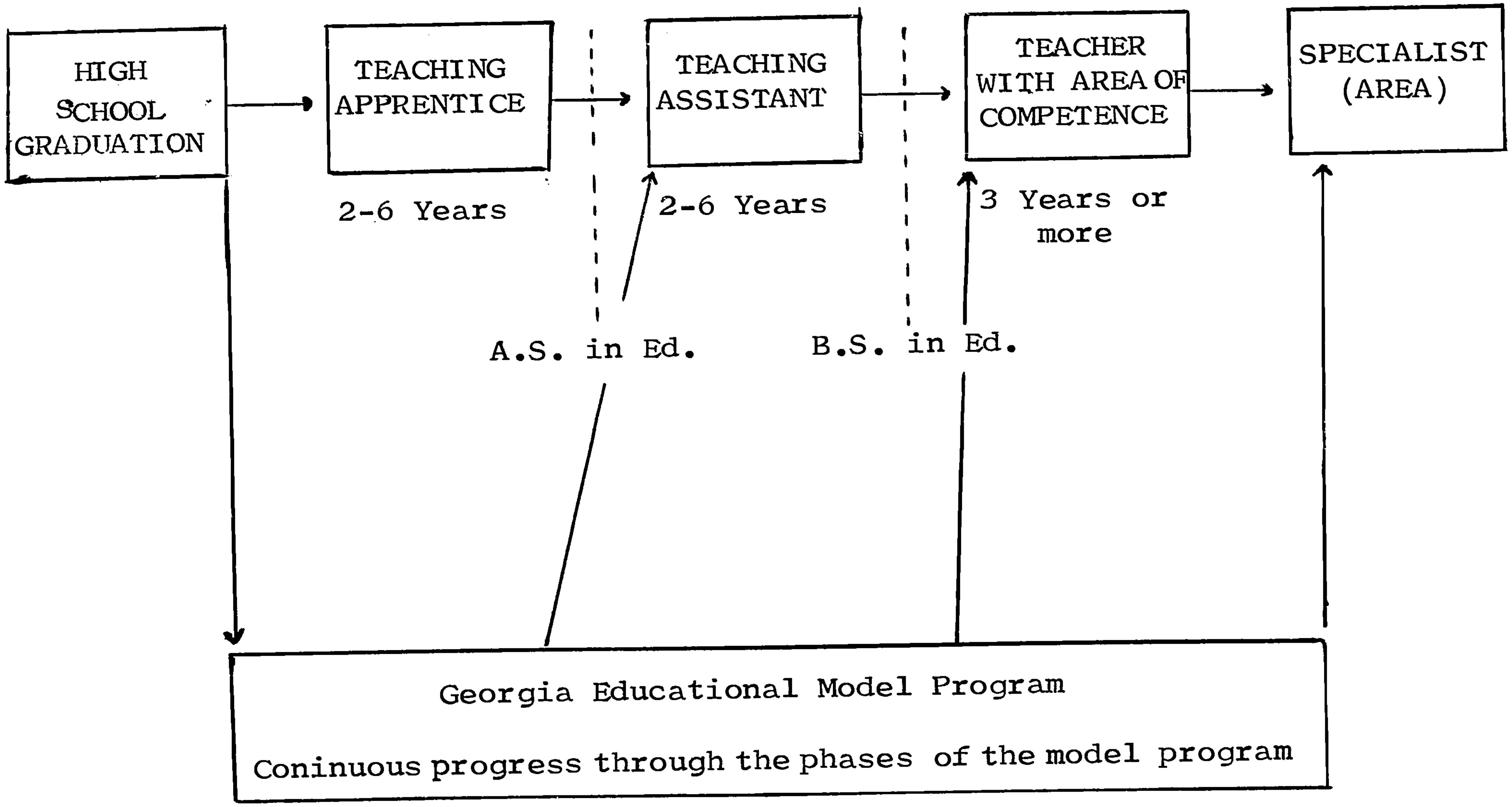

HIGH SCHOOL GRADUATION
TEACHING APPRENTICE
2-6 Years
TEACHING ASSISTANT
2-6 Years
TEACHER WITH AREA OF COMPETENCE
3 Years or more
SPECIALIST (AREA)
A.S. in Ed.
B.S. in Ed.
Georgia Educational Model Program
Coninuous progress through the phases of the model program

Figure II-3

Paths in the Teacher Career Field

of the admission committee. The value of the letter as a communication media and achievement in high school are appraised. Those who obviously fail to qualify are promptly notified. The others are given, at designated times, a selection test battery consisting of verbal ability, numerical ability, personality schedule, and an interview. Again, those disqualified are notified promptly and the others are admitted. During the first week of college the students are given an orientation into teaching and are administered the biographical information blank. The students then continue in the teacher program or are referred to another college of the university. As the student progresses through the program, he is reviewed after completing each phase. The review includes the student's total development (cognitive and affective). Measures are defined in the evaluation specifications.

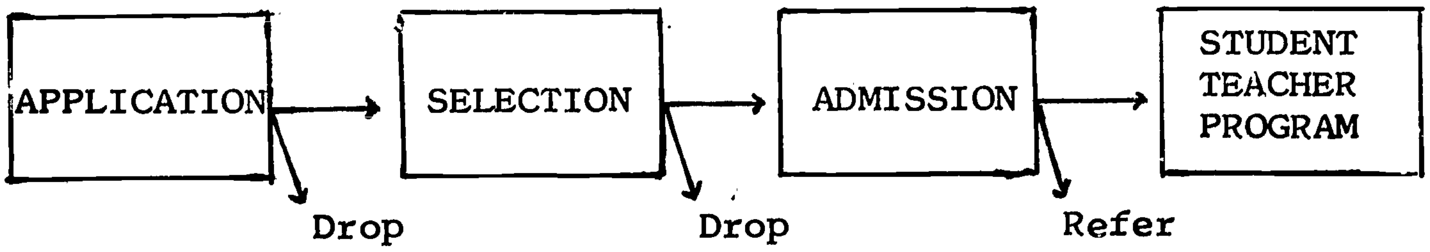
The student selection scores suggested in the specifications are flexible. Students are needed in the teaching field; therefore, a college should admit as many as previously. If in the evaluation the selection procedures are found to be a good predictor of success, the selection measures should not be disregarded. Rather, reduction of (increase when possible) the qualifying score is one possibility. Another alternative is developing test norms for special groups (e.g., disadvantaged). Entry scores are not differentiated for the four personnel categories. As previously stated, a career development program only admits candidates who are judged as able eventually to reach the highest plateau in the sequence.

SPECIFICATIONS FOR SELECTION

2.00 Specifications for Selection

Note: Specifications regarding the administrative organization used to facilitate the selection procedures are contained in Specifications 5.03.

2.01 Specification diagram for student admission sequence.



Letter of request
High school record

Verbal ability
Numerical ability
Personality schedule
Interview

Orientation
Biographical information

2.02 . Admission to the preprofessional program requires a minimum score of 500 in verbal ability on a measure such as the Scholastic Aptitude Test.

2.02.01 Consideration for admission to the preprofessional program is given to students who have achieved at or above the fiftieth percentile in high school graduating class. (For example, see Specification 2.02.06 and explanation under rationale.)

2.02.02 For admission to the preprofessional program a minimum average interest in teaching as measured by such a test as the Strong Vocational Interest Blank is required.

2.02.03 In personality characteristics, as measured by a test such as Edward's Personal Preference Schedule, students admitted to the preprofessional program do not deviate in a statistically significant amount (e.g., .05 level). (A significant deviation requires an interview by and consent of a psychologist for admission.)

2.02.04 For admission to preprofessional program a student must satisfy all state requirements such as legal, medical, and age limitations.

2.02.05 Norms for particular students are derived from the group to which the student belongs.

2.03 Admission to the professional program requires satisfactory completion of all requirements of the preprofessional program (see Specifications 5.01).

2.03.01 Students entering the professional program who elect mathematics or science as areas of competency must score a minimum of 500 in quantitative ability on a measure such as the Scholastic Aptitude Tests.

2.03.02 Admission to the professional program requires a minimum score equivalent to a "B+" interest as measured by a test such as the Strong Vocational Interest Blank.

2.04 For admission to the specialist program a candidate must have satisfied all requirements of the professional program and possess certification as an elementary teacher (see Specifications 5.00).

2.04.01 Candidates admitted to the specialist program have demonstrated satisfactory performance in an area of competency (see Specifications 3.03).

2.04.02 Candidates admitted to the specialist program have obtained a minimum score of 500 in qualitative ability on a measure such as the Graduate Record Examination.

2.04.03 Candidates admitted to the specialist program who elect specialization in mathematics or science have obtained a minimum score of 500 in quantitative ability on a measure such as the Graduate Record Examination.

2.04.04 Candidates admitted to the specialist program have obtained a minimum score of 500 in the area of his speciality on such a measure as the Advanced Test of the Graduate Record Examination.

2.04.05 Candidates admitted to the specialist program have demonstrated skill and proficiency in teaching (see Specifications 4.00).

2.05 Diagram of specifications for selection.

Personnel Category	Qualitative (e.g., SCAT)	Quantitative (e.g., SCAT)	Interest (Strong for Teaching Area)	Biographical Information Blank	Personality Schedule (e.g., Edwards)	School Achievement
Teacher Apprentice	500		B	*	*	↑ 50th Percentile in High School ↓
Teacher Assistant	500		B	*	*	
Teacher (area competent)						
Language arts	500		B+	*	*	
Mathematics	500	500	B+	*	*	
Social science	500		B+	*	*	
Science	500	500	B+	*	*	
Art	500		B+	*	*	
Music	500		B+	*	*	
Foreign language	500		B+	*	*	
Physical education	500		B+	*	*	
Specialist	(GRE	(GRE	(GRE Ad. Test)			
Reading	(500)	)	500			
Mathematics	500	500	500			
Social science	500		500			
Science	500	500	500			
Art	500		500			
Music	500		500			
Physical education	500		500			
Guidance	500	500	500			

* Any significant deviation from normal will be cause for interview by psychologist.

References

Edward's personal preference schedule. (Rev. ed.) New York: Psychological Corporation, 1959.

Graduate record examination. (Rev. ed.) Princeton: Educational Testing Service, 1963.

Scholastic aptitude test. Princeton: Educational Testing Service, 1963.

Strong vocational interest inventory. (Rev. ed.) Palo Alto: Stanford University Press, 1963.

Zabrowski, E. K., et al. *Student-teacher population growth model*. Washington: National Center for Educational Statistics, U. S. Department of Health, Education, and Welfare, O. E. 10055, Working Paper, 1968.

PART THREE

PERFORMANCE SPECIFICATIONS

Performance specifications (statements which describe a particular competency or competency requirement that a teacher should possess in order to operate at optimum effectiveness in a teaching-learning situation) for a teacher education preservice and inservice program form the major portion of this part of the report. In addition, the rationale and a description of procedures used for their development is presented.

Rationale and Procedure

GEM's position is that the teacher education program should be designed in relation to the job the teacher is required to perform in the classroom. By defining what the job actually is, the competencies necessary to perform specific tasks may be adequately determined. In other words, it would logically follow that the content of a teacher education program should be based on the teaching act itself.

Studies of teaching and teaching behaviors (Bellack, 1963; Flanders, 1963; Hughes, 1959; Ryans, 1960; Smith, 1961) provide a partial base on which this rationale is built. In addition, attempts to develop theoretical paradigms by groups such as AACTE's Team Project provide further support for this position. Thus, the content for the GEM teacher training program is stated as performance specifications which are based on actual teaching behaviors.

The task of deciding what the teacher's job is began with a determination of the goals for the elementary school. A search of the literature revealed seven goals generally accepted by most professional educators (see Appendix B). These goals provided the framework for the development of elementary school objectives, which, in turn, provided the basis for determining pupil learning behaviors, teacher teaching behaviors, teacher job analysis, and, finally, the performance behaviors.

The elementary school objectives (see Appendix C) were determined by specialists within the College of Education of the University of Georgia. Each content area prepared objectives for their particular field. Objectives that cut across subject areas such as cognitive processes, values, attitudes, and feelings were prepared by the GEM staff and then approved by each group within the college having responsibility for the preparation of elementary school personnel.

The identification of pupil learning behaviors also involved the content specialists. They were asked to take each objective and describe how a pupil would have to behave if he were to acquire the characteristics representative of this objective. These pupil learning behaviors provided the basis for determining teacher teaching behaviors--those teacher behaviors necessary to develop the desired pupil learning behaviors. Finally, teacher teaching behaviors supplied information for the job analysis and performance specifications for a teacher education program. Figure III-1 is an example of a work sheet used for this task.

Objectives of the elementary school alone cannot provide the total content for a teacher education program. Consequently, it was necessary to look at other facets of the total school program such as general instructional principles, teaching principles, learning principles, and organization principles. These principles provided certain teacher objectives and teacher behaviors which, in turn, provided an additional basis for the job analysis and for the determination of performance specifications. Working papers prepared by the GEM staff provided the basis for the development of these principles (see Appendix B). (A sequential procedure was developed that drew a teacher objective from each principle.) The achievement of this objective requires certain teacher teaching behaviors. Here, again, behaviors supply data for the job analysis and performance specifications. Figure III-2 is an example of the work sheet used for this task.

Objective

To learn to solve problems.

Pupil Learning Behaviors

1. The child identifies problems.
2. The child formulates hypotheses.
3. The child gathers information.
4. The child analyzes data.
5. The child evaluates alternate solutions.
6. The child generalizes solutions.

Teaching Behaviors

1. The teacher organizes problem situations.
2. The teacher interests pupils in a problem and observes its formulation.
3. The teacher observes information gathering and processing.
4. The teacher assists, as required, in developing a solution to a problem.

Suggested Specifications for a Teacher Education Program

A teacher education program will provide the student with:

1. Knowledge of and skill in developing problem situations.
2. Knowledge of and skill in techniques of presenting problem solutions methods.
3. Knowledge of and skill in critiquing problem solutions.

Figure III-1

Cognitive Processes--Specification Work Sheet

Principle Number 1

The instructional program provides for continuous intellectual stimulation.

Teacher Objective

Recognizes the role of motivation and intellectual stimulation in the learning process and provides for its presence in the instructional program.

Teacher Teaching Behaviors

1. Provides learning experiences in which children are working at a level commensurate with both their ability and achievement.
2. Provides a developmental program where pupils can continually advance in learning.
3. Makes learning meaningful and worthwhile.
4. Considers pupil interest, imagination, and energies as a vital component in developing an instructional program.
5. Encourages children to contribute to the planning of learning experiences.

Teacher Job Analysis

The teacher recognizes the role of motivation and intellectual stimulation in the learning process and provides for its presence in the instructional program.

Suggested Specifications for a Teacher Education Program

A teacher education program will provide the student with:

1. Knowledge of the learning process and the role of motivation and intellectual stimulation.
2. Knowledge of and ability to use diagnostic instruments available to determine pupils' achievement in relation to potential.
3. Skill in providing learning situations that promote pupil initiated activities, creative endeavors, and independent inquiry.
4. Skill in meeting the needs of both slow and rapid learners.

Figure III-2

Instructional Principles--Specification Work Sheet

Finally, GEM takes the position that a teacher education program should attempt to develop a teacher with adequate personality characteristics. Consequently, humanistic learnings, attitudes, and values must be incorporated into the program (Combs, 1965). It must be acknowledged, however, that to date evaluative criteria for measuring attainment in these areas is not sufficient. Despite the lack of evaluative measures, we believe that the personality development of the teacher is as important as his intellectual development.

A synthesis of the available research and literature, especially that developed by the National Training Laboratories, produced generalizations which have been translated into six objectives for the development of an adequate personality. We have attempted, in Section II, to present sample personality characteristics that should be taken into account in the development of a teacher education program. The six objectives are listed below:

1. To develop and accept an accurate perception of self, in order to achieve a more adequate personality.

2. To acknowledge and accept one's social, psychological, and physical needs, in order to achieve a more adequate personality.

3. To acknowledge, accept, and deal appropriately with one's emotions, feelings, and intuitions, in order to achieve a more adequate personality.

4. To develop and enlarge one's capacity for human understanding and compassion for others, in order to achieve a more adequate personality.

5. To more fully identify and achieve toward one's aspirations and goals, in order to achieve a more adequate personality.

6. To awaken to and develop an awareness of the process of becoming, in order to achieve a more adequate personality.

Classification of Specifications

The system of classification of specifications used by GEM has as its base the Taxonomy of Educational Objectives to designate the intended behavior of students that would result from specific learning experiences. The categories adapted by GEM from the cognitive domain (Bloom, Engelhart, Furst, Hill & Krathwohl, 1956) are as follows: (a) knowledge, (b) comprehension, (c) application, (d) analysis, (e) synthesis, and (f) evaluation. Those adapted from the affective domain (Krathwohl, Bloom & Masia, 1956) are as follows: (a) receiving, (b) responding, (c) valuing, (d) organization, and (e) characterization.

Because the taxonomies are hierarchical in arrangement, the desired behaviors have been classified according to the highest level of learning necessary for optimum performance in specific positions. The assumption is made that the objective in one class makes use of and is built upon the behaviors found in the preceding classes. For an example, see Figure III-3.

	Level of Development					
	Cognitive			Affective		
Characteristic	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
Identification of pupil interest in reading	1	3	5	1	2	3

Note.--Under the cognitive level of development, the teacher is assigned the number 3, which would indicate the application level. It is subsumed that the teacher, because of the hierarchical nature of the classification, has the knowledge and the comprehension necessary for the application. Under the affective level of development, the specialist is assigned a number 3, indicating the valuing level. Again, this subsumes that receiving and responding are necessary for valuing.

Figure III-3

Performance Specifications--Reading

Motor skills is an area that is often implied under certain aspects of the cognitive domain. However, the GEM staff feels that there are particular motor skills that should be separately designated so that it is clearly understood that these skills are necessary for certain tasks. These motor skills have been clarified according to four levels of operation: (a) simple action (response), (b) coordinated action (multiple action), (c) action sequence (procedure), and (d) system action (accomplishing an objective).

For example, to learn to hit a baseball, the pupil learns a simple action such as swinging a bat. In a coordinated action, the pupil swings the bat and watches the ball. Watching the ball, deciding if the ball is in the strike zone, and determining the advisability of swinging or not swinging the bat constitute an action sequence. Finally, if the pupil performs on the sequence level and, in addition, throws and catches the ball, he becomes a member of a team (system action). Thus, one level utilizes and builds upon that preceding it.

Finally, although the affective domain of the taxonomy has been used in the classification of some objectives, for purposes of clarity and emphasis, those relating to personal development have been separately classified in Section II. Here, the taxonomy has not been used because it is hoped that each person (assistant, teacher, and specialist) will strive to achieve toward the maximum development of their individual personalities and, thus, toward the characterization (five level) of the affective domain. Consequently, although it is recognized that each will not achieve this level under each objective, it is, nevertheless, at this time seemingly impossible to determine any cutting point. Therefore, those specifications relating to personal development are stated as desirable ends of the teacher education program with the assumption that each will strive toward maximum attainment.

SECTION I

PERFORMANCE SPECIFICATIONS

3.01 Performance Specifications--Cognitive Processes

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.01.01 Creativity as problem solving.		3	5		4	5
3.01.02 Conditions where the creative process flourishes.		3	6		2	4
3.01.03 Activities for the development of creativity in pupils.	1	3	5	1	3	4
3.01.04 Development of curiosity.		3	5		3	5
3.01.05 Techniques for discovering relationships (e.g., inquiry training).	1	3	4	1	2	3
3.01.06 Techniques for problem solving.	1	3	5	1	2	3
3.01.07 Application of principles from the disciplines to phenomena.		3	4		2	3
3.01.08 Techniques for predicting cause and effect.		3	4		3	4
3.01.09 Interpreting the results of change.		3	6		3	5
3.01.10 Techniques for observing one's environment.	1	3	4	1	2	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.01.11 Techniques for describing one's environment.	1	3	4	1	2	3
3.01.12 Techniques for extracting [illegible]'s environment.	1	3	4	1	2	3
3.01.13 Relationships within the environment.	1	3	4	1	2	3
3.01.14 Measurements and standards.	1	3	4	1	2	3
3.01.15 Techniques for classifying and identifying items in the environment.	1	3	4	1	2	3
3.01.16 Identification of basic types of personality.	1	2	6	1	2	3
3.01.17 Acceptance of basic types of personality.	1	2	4	2	5	5
3.01.18 Development of self-expression.	1	3	4	1	2	3
3.01.19 Development of interpersonal communications.	1	3	6	1	3	4
3.01.20 Pupil feelings, attitudes, and interests.	1	3	6	1	4	5
3.01.21 Techniques for acceptable pupil expression of their feelings.		3	5		4	5

3.02 Performance Specifications--Educational Tests and Measurements

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.02.01 Historical background and overview of educational measurement.		1	3		1	3
3.02.02 Purpose for and components of a test guide.		3	6		1	3
3.02.03 Different types of items and teacher made tests.		3	6		1	3
3.02.04 Instructions for and administration of tests.	1	3	6		1	3
3.02.05 Normative data.		3	6			
3.02.06 Interpretation of test scores.	1	3	6		1	3
3.02.07 Desirable test characteristics.		3	6		1	3
3.02.08 Gain experience in finding test information.		3	6		1	3
3.02.09 Standardized intelligence tests.		2	6		1	3
3.02.10 Special aptitude tests.		2	6		1	3
3.02.11 Achievement batteries.		2	6		1	3
3.02.12 Techniques of self-appraisal.		2	6		1	3

Characteristic	Cognitive: Teaching Assistant	Cognitive: Teacher	Cognitive: Specialist	Affective: Teaching Assistant	Affective: Teacher	Affective: Specialist
3.02.13 Rating methods and construct scales.		1	6		1	3
3.02.14 School testing programs.		1	6		1	3
3.02.15 Methods of reporting student progress.	1	3	6		3	3
3.02.16 Orientation to guidance procedures.		1	3		1	3
3.02.17 Behavioral tests and projective techniques.		1	2		1	3

3.03 Performance Specifications--Instructional Improvement and Professional Development

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.03.01 Self-evaluation procedures to provide individual feedback.			3			3
3.03.02 Relationships between teacher behavior, pupil behavior, and learning.			4			3
3.03.03 Dependent and independent variables of the instructional setting.			5			2
3.03.04 Dependent and independent variables which influence the instructional performance and professionalism of the teacher.			6			3
3.03.05 Dependent and independent variables which influence the non-instructional behavior of the teacher.			6			3
3.03.06 Role differentiation and the variety of staff utilization possibilities.			2			3
3.03.07 Ability to contribute as a group member in cooperative planning and provide leadership in group situations where necessary.			3			3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.03.08 Ability to derive testable hypotheses from actual classroom events, problems, or issues.			4			3
3.03.09 Ability to find and utilize resources, persons, and materials in instructional improvement and professional development.			3			3
3.03.10 Ability to communicate effectively with other staff members, administrators, consultants, resource persons, parents, and lay persons.			3			3
3.03.11 Professional organizations and the role of these in instructional improvement and development of the profession.			4			3
3.03.12 Ability to remain tentative in the face of alternative or conflicting data until a logical or empirical conclusion can be reached.			6			4
3.03.13 Observational techniques for assessment of program effects, achievement, pupil behavior, etc.			6			3
3.03.14 Computational and statistical skills for organizing and analyzing data at the classroom level.			4			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.03.15 Control of instructional behavior (timing, showing enthusiasm, etc.).			3			3
3.03.16 Writing evaluative criteria and instructional objectives in accurate and specific terms.			6			3
3.03.17 Selecting appropriate evaluative techniques and instruments.			6			3
3.03.18 Positive commitment toward life-long learning and systematic improvement as primary requirements for optimum teacher effectiveness and professional development.						5
3.03.19 Positive attitude toward self-evaluation, self-understanding, and the subsequent modification of instructional behavior.						5
3.03.20 Responsibility to the development of education as a profession outside of classroom or instructional duties.						5
3.03.21 Acceptance of assessment, evaluation, and analysis of instructional performance by others.						4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.03.22 Openness to suggested alternate instructional behaviors from others.						4
3.03.23 Enthusiasm for new and "innovative" instructional methods and materials.						3
3.03.24 Inquiry into the individual problems of children and the multiple problems of the classroom and instructional setting.						3
3.03.25 Experimentalism with the variables of instruction and the professional role of the teacher.						3

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3.04 Performance Specifications--Specialized Training Related to Local Conditions

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.04.01 Local factors which influence educational conditions in the school, local school district, community, county, and state.			2			3
3.04.02 Cause-effect relationships between local factors and school conditions.			1			2
3.04.03 Ways in which other teachers have approached and solved problems and issues related to local conditions.			1			3
3.04.04 Alternative solutions to problems arising from local conditions.			3			3
3.04.05 Instructional materials designed for special applications.			1			2
3.04.06 Evaluative techniques for assessing the extent of influence which local factors have on school conditions.			3			3
3.04.07 Strategies for effecting change in local factors and conditions which influence school conditions.			3			3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.04.08 Patterns of action research as a means of local solution of problems.			3			3
3.04.09 Social and philosophical factors as they influence local conditions.			5			3
3.04.10 Community resources which apply toward the solution of problems related to local conditions.			3			2
3.04.11 Adaptation of general instructional methods and materials to fit unique organizational patterns.			3			3
3.04.12 Local curriculum guides and materials.			2			2
3.04.13 Research findings which may bear on local school problems and conditions.			2			2
3.04.14 Unique local and state school policies, procedures, and regulations.			2			3
3.04.15 Local school philosophy, goals, and objectives.			2			3
3.04.16 Techniques for evaluating the influence of local factors on school conditions.			6			3

Chararteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.04.17 Adaptation of available instructional materials to fit certain local conditions.			3			2
3.04.18 Adaptation of general instructional methods and techniques to fit certain local conditions.			3			2
3.04.19 Investigation of cause-effect relationships between local factors and school conditions.			4			3
3.04.20 Public relations and political activities.			3			3
3.04.21 Operations or action research on classroom or school problems.			3			2
3.04.22 Communication with parents regarding local conditions and school problems.			3			3
3.04.23 Curiosity regarding local factors and their relationship to school conditions.						2
3.04.24 Openness and acceptance for alternative solutions to problems arising from local conditions.						3
3.04.25 Positive attitude toward change where improvement is the likely result.						4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.04.26 Positive attitude toward inquiry and experimentation.						5
3.04.27 Positive attitude toward individual responsibility and initiative.						5
3.04.28 Positive attitude toward political power and public relations as means for changing local conditions.						5

3.05 Performance Specifications--Psychology

Characteristic	Level of Development: Cognitive: Teaching Assistant	Cognitive: Teacher	Cognitive: Specialist	Affective: Teaching Assistant	Affective: Teacher	Affective: Specialist
3.05.01 Genealogy of developmental conceptions.		3	6		3	4
3.05.02 Assessment of developmental change.		3	6		3	4
3.05.03 Individuality of development.	1	3	6	2	3	4
3.05.04 Status and progress in organismic development.		3	6			
3.05.05 Complexity of growth of the organism.		3	6			
3.05.06 Use of norms in development.		3	6			
3.05.07 Methods for appraising growth.		3	6			
3.05.08 Maturation and growth.		3	6			
3.05.09 Maturation and experience.		3	6			
3.05.10 Psychomotor development.	1	3	6			
3.05.11 Cognitive development.	1	3	6			
3.05.12 Psychoanalytic theory and cognitive development.		3	6			

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist
3.05.13 Behavioristic theory and cognitive development.		3	6			
3.05.14 Cognitive field theory and cognitive development.		3	6			
3.05.15 Social-personal theory and cognitive development.		3	6			
3.05.16 Achieving a sense of self.		3	6	3	3	3
3.05.17 Learned patterns of adaptation for affective development.		3	6	3	3	3
3.05.18 The effect of learning and behavior.		3	6	3	3	3
3.05.19 Language patterns and behavior.		3	6	3	3	3
3.05.20 Socioeconomic influence and behavior.		3	6	3	3	3
3.05.21 Family influence and behavior.		3	6	3	3	3
3.05.22 Peer influence and behavior.		3	6	3	3	3
3.05.23 Factors in individual differences (e.g., sex, age, race, physical, intelligence, and experiential background).		3	6	3	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.05.24 Approaches for studying human development.		2	6			
3.05.25 Associative learning theories of learning (connectionism, conditioning).		3	6			
3.05.26 Reinforcement, instrumental, and operant as components of conditioning.		3	6			
3.05.27 Field or cognitive learning theories (phenomenological, Lewins Vector, Talman's Purposive Behaviorism, Piagetian).		3	6			
3.05.28 Genetic, experiential, transactional, and factorial elements in intellectual development.		3	6	3	3	3
3.05.29 Needs, motivation, motives, experiences, and view of self as determinants of behavior.		3	6	3	3	3
3.05.30 Reward and punishment, success and failure, praise and reproof, competition and cooperation, and individual goal setting as factors in discipline and motivation.		3	6	3	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.05.31 Retention and transfer of training (remembering, forgetting, overlearning).		3	6			
3.05.32 Problem solving, meaning, and creativity and their development in the classroom.		3	6	3	3	3
3.05.33 Implications of growth, development, and learning to the classroom.		2	6	3	3	3

3.06 Performance Specifications--Pedagogy

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.06.01 Pupil classroom behavior.	2	5	6	1	3	3
3.06.02 Effect of heredity and environment on pupil development.	1	4	6	1	3	5
3.06.03 Self-evaluation.		4	4		3	5
3.06.04 Techniques for developing pupil self-evaluation.		3	5		3	3
3.06.05 Methods for developing pupils as independent learners.		3	4		3	3
3.06.06 Individual differences in pupils.		4	6		5	5
3.06.07 Influence of communications media on individuals and society.	1	2	4	2	2	3
3.06.08 Planning instructional programs.		3	6		3	3
3.06.09 Techniques of pupil-teacher planning.		3	4		3	3
3.06.10 Organizing and implementing instructional sequences.		4	6		3	4
3.06.11 Early intellectual stimulation.		3	4		2	3
3.06.12 Research on pupil interests.		2	4		2	3

Characteristic	Level of Development Cognitive Teaching Assistant	 Cognitive Teacher	 Cognitive Specialist	 Affective Teaching Assistant	 Affective Teacher	 Affective Specialist
3.06.13 Methods for individualizing instruction.		3	4		3	3
3.06.14 Evaluation of pupils on an individual basis.		3	4		3	3
3.06.15 Group dynamics in the classroom.		3	4		3	3
3.06.16 Classroom interaction processes.		3	4		3	3
3.06.17 Classroom climate.	1	3	6	1	4	4
3.06.18 Directing group discussion.	1	3	4	1	2	2
3.06.19 Problem solving techniques.		3	4		2	2
3.06.20 Social responsibility of the individual in society.	1	3	4	1	3	5
3.06.21 Pupil motivation.	1	3	5	1	3	4
3.06.22 Sociometric techniques.	2	4	6	2	3	5
3.06.23 Decision-making process as it relates to teaching.		3	6		3	3
3.06.24 Respect for the uniqueness of each individual.	1	3	4	2	6	6
3.06.25 Techniques for providing learning experiences that will allow each pupil to meet with more success than failure.	1	3	6	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.06.26 An understanding of self.		4	6		5	5
3.06.27 Techniques for developing pupil self-understanding.		3	4		3	3
3.06.28 Social norms and social behavior.	1	2	4	2	2	3
3.06.29 Current events.	1	2	4	1	3	3
3.06.30 Techniques for incorporating current happenings into the instructional sequence.		3	6		2	3
3.06.31 Criteria for the selection of instructional material.		3	4		2	2
3.06.32 Democratic living in the classroom.	2	3	4	2	3	3
3.06.33 Learning experiences that promote divergent and convergent thinking.		3	4		3	4
3.06.34 Social change and its relationship to the school program.		2	4		2	3
3.06.35 Classroom grouping procedures and techniques.		3	6		3	3
3.06.36 Scope and sequence of the total instructional program (3-12).		2	6		2	2

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.06.37 Preparation of classroom objectives (behavioral).		3	4		2	2
3.06.38 Overall program objectives.		4	6		3	3
3.06.39 Teacher organizations.		2	3		2	2
3.06.40 Teacher rights and legal status.		2	4		2	3
3.06.41 Public school organization and line and staff relationships.		2	4		2	2
3.06.42 Teacher contracts, benefits, and tenure.		2	4		2	2
3.06.43 Grading and promotion practices.		3	4		2	2
3.06.44 Community services available to schools and pupils.		2	4		2	2
3.06.45 Attendance procedures, record keeping, inventories, other reports.		3	4		2	2
3.06.46 Classroom management.		4	6		2	2
3.06.47 Pupil discipline.		4	6		2	2
3.06.48 Parent-teacher and parent-teacher-pupil conference techniques.		3	4		3	3

3.07 Performance Specifications--Social Sciences

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.01 Selection and translation into educational objectives the content of history, geography, sociology, anthropology, economics, and political science.		3	5		2	2
3.07.02 Learning tasks related to the development of social science concepts (time and chronological concepts, spatial and relationship concepts).		3	4			
3.07.03 Appropriate resources for developing social science concepts.	1	1	2			
3.07.04 Observational, written, and other assessment techniques for pupil performance evaluation.		3	3		2	3
3.07.05 Significant historical events.		2	3			
3.07.06 Map, picture, graph, chart, and diagram skills.	1	3	4	1	1	2
3.07.07 Primary source documents for teaching the American political heritage.		3	5		2	2
3.07.08 Methods to teach communism at different conceptual levels.		3	5		2	3
3.07.09 Techniques for teaching controversial issues.		3	5		3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.10 Techniques to stimulate interest in current affairs.		3	5		3	4
3.07.11 Types of social problems appropriate for pupil investigation.		3	5		2	3
3.07.12 Concepts and generalizations from the social sciences appropriate for pupil inquiry.		1	1			
3.07.13 Techniques for pupil research (e.g., hypothesis, primary resource materials, verification of data, evaluation).		3	5		2	3
3.07.14 Role of national and state agencies in planning social studies curricula.		1	2			
3.07.15 Interests of elementary pupils relating to the social sciences.		2	3		1	2
3.07.16 Social science topics commonly taught in grades one through seven.		1	5			
3.07.17 Resource units, teaching units, and daily lesson plans.		3	4		1	2
3.07.18 Reading and non-reading learning resources at different conceptual levels.		3	3		2	2

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.19 Types and uses of charts, graphs, diagrams, cartoons, maps, and globes.	1	3	3		2	3
3.07.20 Time, space, and relationship concepts appropriate for the pupils' conceptual levels.		3	5		3	4
3.07.21 Techniques for guiding pupils in interpreting and drawing conclusions from data gathered for inquiry.		3	5			
3.07.22 Techniques to guide pupils through teacher-pupil planning process in structuring inquiry.		3	5			
3.07.23 Assessment of pupil progress, toward a maturing space and time sense.		3	6		1	3
3.07.24 Print and non-print teaching resources to implement historical, geographical, sociological, etc. objectives.		3	4			
3.07.25 Techniques to structure classroom situations in which pupils can discover and practice techniques of communication.		3	5			
3.07.26 Information, materials, etc. which provide support for group work.		3	4		2	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.27 Techniques to structure a classroom in order to provide practice in accepting others.		3	5		3	3
3.07.28 Use of political events as they pertain to teaching objectives.		3	4		1	3
3.07.29 Methods to determine the extent that democratic principles are present in the behavior of pupils.		3	6		2	3
3.07.30 Teacher self-evaluation techniques.		3	6		3	5
3.07.31 Techniques in guiding pupils in the reading process (use of text books, biography, fiction, journals, newspapers, reference sources).		3	5			
3.07.32 Techniques for developing critical reading skills.		3	4			
3.07.33 Dramatic activities appropriate to various units of instruction.		3	5			
3.07.34 Construction activities appropriate to various units of instruction.	2	3	5			
3.07.35 Techniques for identifying primary source data appropriate for use by pupils.		3	4			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.36 Methods in establishing various group situations to consider and solve group problems.		3	5		2	3
3.07.37 Methods to create conditions to allow groups to choose their own methods and set their own pace in considering problems.		3	5		2	3
3.07.38 Methods to guide pupils in presenting the findings of their own inquiry.		3	5		2	3
3.07.39 Methods of evaluating pupils' collection, interpretation, and application of data.		3	6		2	2
3.07.40 Construction and use of rating scales, charts, checklists, etc.		3	5			
3.07.41 Techniques to evaluate reports and other sources of information on individual and group inquiry activities.		3	6		3	3
3.07.42 Techniques in leading group discussion to appraise the effectiveness of individual and group inquiry.		3	5		3	4
3.07.43 Techniques in observing pupil performance and assessing progress in accordance with stated objectives.		3	6		2	3
3.07.44 Evaluation of printed teaching materials.		3	4			
3.07.45 Sociometric techniques to determine pupil attitudes.		3	3			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.46 Identification of literary, art, and music sources appropriate to a given study and to the conceptual level of pupils.		3	4		3	3
3.07.47 Techniques for applying the steps for teaching reading-interpretation lessons in the social studies text book, maps, graphs, charts, tables, diagrams, and pictures.		3	5			
3.07.48 Value for each pupil.				3	3	3
3.07.49 Exhibition of desired behaviors as leader-participant in group situations.				2	3	3
3.07.50 Ability to evaluate personal beliefs and behavior toward those pupils different from oneself.				2	3	3
3.07.51 Practice of democratic principles in classroom behavior.				3	3	3
3.07.52 Appreciation of the reading difficulties inherent in social studies printed materials.				2	2	2
3.07.53 Significant literature, music, and art from Eastern and Western cultures.		2	3		3	3
3.07.54 Significant scientific developments that have influenced the development of Anglo-American culture, plus European or Asian cultures.		2	3		3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.55 General models of inquiry, plus models particularly appropriate for the various social sciences--history, geography, sociology, anthropology, and political science.		2	3		3	3
3.07.56 Selection, identification, and development of questions and hypotheses appropriate to the social scientists' patterns of inquiry.		5	5			
3.07.57 Methods of data collection appropriate to the various social sciences (written materials, art objects, orally-transmitted information, recorded materials, inscriptions, physical remains, content analysis of printed materials, films, etc., field trips, observation, interviews, polls, questionnaires, role-playing and simulation of activities and experiments).		4	4			
3.07.58 Recording, organizing, and presenting data in forms appropriate for the various social sciences (making notes or tape recording data, construction of maps, models, diagrams, graphs, tables and charts, preparation of sketches, drawings, displays and exhibits, and reports both written and oral to share findings and conclusions).		5	5			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.59 Inquiry methods and materials (differentiating between primary and secondary sources, applying principles of internal and external criteria to data collection).		6	6		3	3
3.07.60 Interpretation of maps and other graphic materials (pictures, charts, tables, diagrams, graphs) to gather and record information.		2	2			
3.07.61 Quantitative techniques in data collection.	3	3	3			
3.07.62 Techniques for effective communication with individuals or groups.	3	5	5	2	3	5
3.07.63 Diagnostic techniques for individual and group problems in group situations.		6	6	2	3	5
3.07.64 Techniques to differentiate between leader-member roles and to fit behavior into appropriate roles.		4	4	2	3	5
3.07.65 Techniques to tabulate, interpret, and apply survey-gathered information.		3	3			
3.07.66 Techniques to generate conclusions based on data.		5	5	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.67 Identification of appropriate primary documents and other sources in specific areas of historical inquiry.		1	1			
3.07.68 Ability to assemble traces of past events (material objects and written traces).		3	5			
3.07.69 Techniques in observing, interviewing, classifying, and using multiple sources.	2	4	4			
3.07.70 History:						
3.07.70.01 Historical framework of time relating to Anglo-American history and one other area (Latin America, Europe, Asia, Ancient History).	2	2	2			
3.07.70.02 Depth studies in Anglo-American, European, Asiatic, or Ancient History.			4			
3.07.70.03 Significant events relating to the development of the above societies and cultures.		4	4	2	3	3
3.07.70.04 Significant events in current history.	1	3	3	2	3	3
3.07.71 Geography:						
3.07.71.01 Cultural geography of Anglo-America plus at least one other area (Latin America, Europe, Asia, or Africa).	1	3	3	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.71.02 Geographic factors and their relationship to the cultural, economic, social, political, and scientific progress of Anglo-America and one other area listed.	1	4	4	2	3	3
3.07.71.03 Physical geography of the earth's surface, earth-sun relationships, land forms, water bodies, climatic factors, natural resources, etc.		4	4			
3.07.71.04 Identification, uses, and limitations of different map projections.	1	3	3			
3.07.72 Sociology:						
3.07.72.01 Structure, function, and role of basic groups in contemporary Anglo-America plus one other area (Latin America, Europe, Asia, Africa).	1	2	2	1	3	3
3.07.72.02 Social institutions operating in the above societies.		2	2	1	3	3
3.07.72.03 Patterns of population in Anglo-American society--communication, mobility, urbanization, etc.			4			3
3.07.72.04 Societal systems of roles, norms, sanctions, and individual and group behavior.	1	3	4	1	3	3
3.07.72.05 Changes in American society--historical and contemporary.	1	3	6	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.72.06 Recognition that the world is affected by other individuals and groups.	1	2	4	2	2	2
3.07.73 Anthropology:						
3.07.73.01 Mores, beliefs, languages, etc. of Anglo-American cultures.	1	2	5	1	3	3
3.07.73.02 Mores, beliefs, languages, etc. of cultures other than Anglo-American.		2	2		2	2
3.07.73.03 Comparison of Anglo-American culture patterns with Latin American, European, Asian, and African patterns in the present and in the development of present cultures.			6			3
3.07.74 Political Science:						
3.07.74.01 Levels of government and description of their unique and shared responsibilities.	1	3	4	1	3	3
3.07.74.02 Function of and similarities and differences in the roles of political parties.	1	4	4	1	3	3
3.07.74.03 Nature and processes of democratic government.	1	3	4	1	3	3
3.07.74.04 Principles of democratic citizenship (rights, obligations, dissent, civil rights, etc.).	1	3	6	1	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.07.74.05 Functions of international governmental agencies.		2	2	1	2	2
3.07.74.06 Similarities and differences in various national governments (U. S., USSR, United Kingdom, Communist China).	1	6	6	1	3	3
3.07.74.07 Political decision-making process.	1	2	2	2	3	3
3.07.74.08 Effect of changing political roles on attitudes of national governments.		2	4		3	3
3.07.74.09 Historical development of democratic principles in the United States.	1	2	3	1	2	3
3.07.75 Economics:						
3.07.75.01 Economic factors affecting a society:						
1. Production -- resources, capital, labor, etc.						
2. Distribution -- wholesaling, retailing, advertising.						
3. Exchange -- division of labor, specialization, mediums of exchange, etc.						
4. Consumption -- needs and desires of consumers, advertising, competition, protective agencies, etc.		4	4		3	3

3.08 Performance Specifications--Speech

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.08.01 Basic elements of speech and the ability to use them in speaking clearly, effectively, and in conformity with present standards of educated usage.	2	4	6	2	3	3
3.08.02 Role of speech in the communication process.	2	4	5			
3.08.03 Principles of group dynamics, group discussion, oral reporting, panel discussions, and choral reading.	2	3	6	2	3	5
3.08.04 Language techniques, speech techniques, and social techniques interrelated in the speech process.	2	5	6			
3.08.05 The importance of good human relations in spoken communication.	2	3	6	2	3	5
3.08.06 Reflective thinking.	2	5	6			
3.08.07 Analyzing, synthesizing, and evaluating speech content.	2	5	6			
3.08.08 Group dynamics and the interaction process.	2	5	6			
3.08.09 Problem solving.	2	5	6			
3.08.10 Synthesis.	2	5	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.08.11 Critical evaluation.	2	5	6			
3.08.12 Speaking in such a way as to convey meaning, mood, emotion, overtones, variety, etc.	2	3	6	2	3	5
3.08.13 Feeling for the value of self-expression and the importance of what another has to say.				3	5	5
3.08.14 Appreciation for individuality in speech techniques.				3	5	5
3.08.15 Sensitivity to the needs, interests, and capabilities of both speaker and listener.				3	5	5
3.08.16 Openness and receptiveness to ideas.				3	5	5
3.08.17 Sensitivity to the speech backgrounds of children.				3	5	5
3.08.18 Language acquisition--general developmental patterns as well as vocabulary and syntactic norms for various levels (for oral and written modes).	1	3	5			
3.08.19 Methods and procedures for evaluating children's written and oral language production.	1	4	6			

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist
3.08.20 Correlation of the contents and skills of listening, speaking, reading, and writing with one another and with other subjects in the curriculum.	1	5	6			
3.08.21 Lessons that focus on developing maturity of expression (sentence-combining, transformations, abstractions, precise vocabulary).	1	5	6	2	3	5
3.08.22 Conventions of formal speaking and writing situations emphasizing that the conventions of things like formal debate, after-dinner speeches, and punctuations are more or less rigid expectations (not absolute "rules") of the language.	1	5	6	2	3	5
3.08.23 Oral reading with expression and clarity.	2	3	6	2	3	3
3.08.24 Reading and story telling.	2	3	6	2	3	3
3.08.25 Fostering creativity in the language usage of children.	1	5	6	2	3	5
3.08.26 Helping children to become open, responsive individuals and helping them to respond critically and constructively to one another.	1	5	6	2	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.08.27 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.08.28 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5
3.08.29 Respect for one's own abilities and limits in oral and written expression.				2	5	5
3.08.30 Tolerance for individual language differences in students.				2	5	5
3.08.31 Openness and receptiveness to new ideas.				2	5	5
3.08.32 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5
3.08.33 Sensitivity to the needs, interests, and capabilities of individual pupils.				2	5	5
3.08.34 Phonology (phonetics and phonemics): that sounds can be distinguished and symbolized; that only certain sounds are significant in English as in most dialects.	1	3	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.08.35 Helping pupils to control and expand their linguistic resources for conversation and other forms of oral discussion, reports, and freely developed speeches for public discussion.	2	3	6	2	3	3
3.08.36 Helping children diagnose their own language problems.	1	4	6	2	3	5
3.08.37 Language development of children in terms of vocabulary and syntax.	1	5	6			
3.08.38 Significant features of children's regional and social dialects.	1	3	6	2	3	5
3.08.39 Source and development of English vocabulary, including historical changes in pronunciation and meaning.		2	4			
3.08.40 Oral discussion techniques.	1	3	6			
3.08.41 Regional dialects, social levels, and functional varieties of English: geographical differences, standard, non-standard dialects, formal-informal.	2	4	6	2	4	4
3.08.42 Significance of language in the child's personal, social, academic, and economic development.	1	4	6	2	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.08.43 Methods and procedures for teaching a "standard" English dialect (social level of usage) as an alternative dialect.		3	5	2	3	6
3.08.44 Relationships between language development and personal development.		5	6			
3.08.45 Respect for the power of language--its ability to communicate; to inform, persuade, or entertain.				2	4	4
3.08.46 Respect for skillful use of language--both technical proficiency and emotional effect--in an individual or through a medium.				2	4	4
3.08.47 Understanding of the cultural implications of language and language usage and its effect on individual children.				2	4	4
3.08.48 Respect and encouragement for developing maturity in children's language, including an occasional misuse of a new word, inflection, or structure.				2	5	5
3.08.49 Respect for language differences--historical, regional, social, and functional.				2	4	4

3.09 Performance Specifications--Reading

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.09.01 Definitions and descriptions of the reading process.		3	6		2	2
3.09.02 Attitudes, knowledge, and skills pupils need before direct reading instruction can begin.	1	4	6	1	3	3
3.09.03 Identification and recognition skills.	1	4	6	1	2	2
3.09.04 Literal, interpretive, and critical comprehension.	1	4	6	1	2	2
3.09.05 Work-study skills.	1	3	6	1	2	2
3.09.06 Oral reading skills.	1	3	6	1	2	2
3.09.07 Rate adjustment.		4	6		2	2
3.09.08 Research on reading habits and tastes of children and adults.		2	6		2	3
3.09.09 Social behaviors and academic achievement.	1	3	6	2	3	5
3.09.10 Relationship between learning and culture.		3	6		3	5
3.09.11 Psychological characteristics of the child and their relationship to reading (intellectual, emotional, and social).	1	3	6	2	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.09.12 Physiological characteristics of the child and their relationship to reading.	1	3	6	2	3	5
3.09.13 Historical background of reading instruction (periods of reading instruction and their relationship to present practices).		2	6		1	3
3.09.14 Characteristics and purposes of contemporary reading programs.	1	2	6	1	2	2
3.09.15 Preparation of reading objectives in behavioral terms.		3	6		2	3
3.09.16 Instructional cycle (diagnosing, planning, instructing, evaluating).	1	4	6	1	3	5
3.09.17 Techniques to plan and execute directed reading lessons in simulated and clinical situations with individuals and groups.	1	3	6	1	3	3
3.09.18 Techniques to evaluate individual and group progress using formal and informal techniques.	1	4	6	1	2	3
3.09.19 Techniques to evaluate the instructional sequence.		4	6		2	5
3.09.20 Scope and sequence of the total reading program (ages 3-12).		2	6		2	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.09.21 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5
3.09.22 Openness and receptiveness to new ideas.				2	5	5
3.09.23 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5
3.09.24 Sensitivity to the needs, interests, and capabilities of individual students.				2	5	5
3.09.25 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.09.26 Correlation of the contents and skills of listening, speaking, reading, and writing with one another and with other subjects in the curriculum.	1	5	6			
3.09.27 Fostering creativity in the language usage of children.	1	5	6	2	3	5
3.09.28 Helping children to become open, responsive individuals and helping them to respond critically and constructively to one another.	1	5	6	2	5	5

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist
3.09.29 Oral reading with expression and clarity.	2	3	6	2	3	3
3.09.30 Skill in reading and story telling.	2	3	6	2	3	3

3.10 Performance Specifications--Literature

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.01 Critical approaches to literature: historical, biographical, and formal analysis.	2	4	6	2	4	4
3.10.02 Basic literary concepts, such as genre, point of view, structure, style, theme.	2	4	6			
3.10.03 Basic elements of imaginative writing, such as imagery, symbolism, allegory, figurative language, and irony.	2	4	6			
3.10.04 Role of literature in this and other cultures.	2	4	6	1	4	4
3.10.05 Critical standards by which to judge the value of works of literature.	2	4	6	1	5	5
3.10.06 Independent formulation of an interpretation of an author's meaning.	2	4	6	1	5	5
3.10.07 Aesthetic response to literature: recognition of the power of literary art.	2	4	6	1	5	5
3.10.08 Appreciation of literature as a field worthy of study.				3	4	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.09 Appreciation of literature as worthy of being a lifetime leisure pursuit.				3	4	4
3.10.10 Recognition and appreciation of literature as aiding an individual in his understanding of both himself and his fellow man.				3	4	4
3.10.11 Recognition and appreciation of literature as stimulating an individual's growth in understanding, sensitivity, and compassion.				3	4	4
3.10.12 Literature, both traditional and contemporary, which is most appropriate for specific individuals and groups in elementary schools including poetry, folklore, biography, fanciful fiction, realistic fiction, and informational literature.	1	3	6	1	4	4
3.10.13 Relationship of literature to other subject-matter areas, especially social studies and science.	1	4	4			
3.10.14 Complementary relationship between literature and the instructional reading program.		3	3			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.15 Relationships between literature and children's creative oral and written expression.		3	3	2	3	3
3.10.16 Role that literature can play in enriching the lives of children.	2	3	5	1	4	4
3.10.17 Teaching methodologies and techniques for using literature in the school program.	1	3	6			
3.10.18 Repertoire of stories for telling.	1	5	5	2	3	3
3.10.19 Aids to selection of books appropriate for use with children such as reviews in professional journals, reviews in popular magazines, reviews in newspapers, and various bibliographies of children's books.	1	4	6	2	3	3
3.10.20 Criteria for the selection of literature for various purposes and for specific individuals and groups in elementary schools considering content of the literature, illustrations accompanying the literature, and format of the book.	1	4	6	1	4	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.21 Evaluation and selection of literature appropriate for various purposes and for specific individuals and groups in elementary schools.	1	3	6	1	4	4
3.10.22 Evaluation and selection of children's books by considering factors other than content.	2	4	6			
3.10.23 Selection of literature appropriate to the instructional reading program.	1	4	6			
3.10.24 Reading aloud both accurately and expressively so that children's enjoyment of the literature will be optimal.	5	5	5			
3.10.25 Dramatization of literature so that the world of literature may come alive for children through their direct participation.	1	5	5	1	3	3
3.10.26 Choral speaking activities which will help to develop the children's sensitivity to beautiful thought, word, and tone.	1	5	5	1	3	3
3.10.27 Use of various art media which can help children interpret their experiences with literature.	1	5	6	1	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.28 Teaching plans which provide varied and enjoyable experiences with literature so that children will gain both enjoyment and knowledge therefrom.	1	5	6	1	3	3
3.10.29 A positive attitude toward literature for children as worthy of being a field of continuing interest and study.				3	4	4
3.10.30 Recognition and appreciation that literature can and should be a prevailing force in the humanization of young people; that it may aid children in understanding themselves, other human beings, and their environment.				3	4	5
3.10.31 Enthusiasm for literature in all activities in which it is a part.				2	3	3
3.10.32 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5
3.10.33 Openness and receptiveness to new ideas.				2	5	5
3.10.34 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.10.35 Sensitivity to the needs, interests, and capabilities of individual students.				2	5	5
3.10.36 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.10.37 Helping children to become open, responsive individuals and helping them to respond critically and constructively to one another.	1	5	6	2	5	5
3.10.38 Relationship existing between child development and the selection of children's literature.	1	5	6	2	3	5

3.11 Performance Specifications--Composition

Characteristics	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.01 Role of the written word in human communication.	2	4	5			
3.11.02 Role of a particular type of media in the communication of a message, e.g., the difference between choosing a film or a record for the communication of a specific message.	2	5	6	2	3	3
3.11.03 Different forms of written expression, letters, essays, poetry, novels, short stories, etc.	2	5	6			
3.11.04 Conventions associated with the writing act, namely writing, spelling, punctuation, capitalization.	3	5	6			
3.11.05 Structure of the written word and its relation to the development of words, sentences, paragraphs, etc.	3	5	6			
3.11.06 A sizeable vocabulary background.	2	5	5			
3.11.07 Resource and reference materials helpful in the writing process, the dictionary, thesaurus, style manuals, etc.	2	5	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.08 The composing process as a combination of technical, emotional, and mental operations.	2	5	5			
3.11.09 Development of logical structures as an essential part of any composition, e.g., the incorporation of such concepts as a central idea, a theme, a thesis, a topic sentence, as guidelines in framing a logical, understandable written work.	2	5	6			
3.11.10 Appropriate forms for specific purposes in writing, exposition, description, narrative, research paper, etc.	2	5	6			
3.11.11 Techniques to evaluate the written word in terms of audience, author, and purpose determining such aspects of writing as the use of propaganda, bias, emotional appeal, generalization, satire, semantic differences, etc.	2	5	6	2	3	5
3.11.12 Editorial techniques used to critically read and respond to written works.	1	5	6	2	3	5
3.11.13 Classical rhetorics and their relation to modern rhetorics.	2	4	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.14 Analyzing, comparing, and choosing from a general body of knowledge relevant facts and ideas.	2	5	6	2	3	5
3.11.15 Organizing ideas into a logical structure and an understandable whole.	2	5	6	2	3	5
3.11.16 Criticizing and refining ideas written for the purpose of clarity, emphasis, and increased understandability.	2	5	6	2	3	5
3.11.17 Applying the techniques of problem solving--defining a problem, assessing a situation, using judgment in selecting ideas--to the composing process.	2	5	6	2	3	5
3.11.18 Techniques to evaluate compositions to determine such characteristics of good writing as substantial and relevant content, organization, clarity, appropriateness of tone, and accuracy in mechanics and usage.	2	6	6	2	3	5
3.11.19 Techniques to evaluate, in detail, the strengths and weaknesses of written expression and communicating this analysis effectively.	2	6	6	2	3	5

Characteristic	Level of Development Cognitive Teaching Assistant	Teacher	Specialist	Affective Teaching Assistant	Teacher	Specialist
3.11.20 Recognition of the role of the written word in society and the responsibility of each in keeping with that role.				2	3	5
3.11.21 Realization of the importance of effective communication in the area of human relations.				2	5	5
3.11.22 A balanced attitude in terms of the need for novelty in expression as well as the need for convention.				2	3	5
3.11.23 Recognition of the importance of a classroom climate that is conducive to creative work--one that is rich in idea-giving, thought-provoking objects and events, as well as receptive in the sense that the pupil is respected and experiences a sense of belonging and worth.				2	5	5
3.11.24 An attitude of acceptance for each individual for his individuality, for what he has to say, and for the manner in which he expresses himself.				2	5	5
3.11.25 An attitude that recognizes the worth of each individual and is reflected in a willingness to help each to develop according to his ability, achievement, and desire.				2	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.26 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5
3.11.27 Openness and receptiveness to new ideas.				2	5	5
3.11.28 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5
3.11.29 Sensitivity to the needs, interests, and capabilities of individual pupils.				2	5	5
3.11.30 Preparation for pupil writing by focusing on pupil's thoughts and feelings (having something to say), and a real or imagined audience.	1	5	6			
3.11.31 Conduct lessons that focus on developing maturity of expression (sentence-combining, transformations, abstractions, precise vocabulary).	1	5	6	2	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.32 Conventions of formal speaking and writing situations emphasizing that the conventions of things like formal debate, after-dinner speeches, and punctuation are more or less rigid expectations (not absolute "rules") of the language.	1	5	6	2	3	5
3.11.33 Morphology: bound and free morphemes; inflectional suffixes; derivational affixes; parts of speech (form classes): nouns, verbs, adjectives, adverbs, function words.	1	3	6			
3.11.34 Syntax: basic sentence patterns, transformations, and expressions.	1	3	6			
3.11.35 Fostering creativity in the language usage of children.	1	5	6	2	3	5
3.11.36 Helping children to become open, responsive individuals and helping them to respond critically and constructively to one another.	1	5	6	2	5	5
3.11.37 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.11.38 Correlation of the contents and skills of listening, speaking, reading, and writing with one another and with other subjects in the curriculum.	1	5	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.11.39 Respect for one's own abilities and limits in oral and written expression.				2	5	5
3.11.40 Tolerance for individual language differences in pupils.				2	5	5
3.11.41 Language acquisition: general developmental patterns as well as vocabulary and syntactic norms for various levels (for oral and written modes).	1	3	5			
3.11.42 Methods and procedures for developing effective written expression, including the conventions of punctuation and spelling.	1	4	5			
3.11.43 Grammatical systems.	1	3	5			
3.11.44 Linguistic approaches to language.		3	5			
3.11.45 Semantics: symbolic nature of language, denotation and connotation, the use of propaganda, bias, emotional appeal, generalization, satire, etc.	2	4	6	2	4	4
3.11.46 Linguistic analysis.	1	3	4			
3.11.47 Grammatical analysis.	1	3	5			

3.12 Performance Specifications--Drama

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.12.01 Components of plot: exposition, initial incident, rising action, falling action, overall plot development.	1	4	6			
3.12.02 Characterization: methods of characterization, motivation of action, types of convincing characterization.	1	4	6	2	3	3
3.12.03 Concepts of dialogue action and situation.	1	4	6			
3.12.04 Types of drama: comedy, tragedy, farce, romantic drama, fantasy, melodrama, comedy of manners, sentimental comedy, social drama.		2	3			
3.12.05 Styles of drama: realism and naturalism, romanticism, symbolism, expressionism, allegory.		2	3			
3.12.06 Other forms of drama: one act plays, musical plays, symphonic dramas, folk plays, epic theatre.		2	3			
3.12.07 Beginnings of drama through the Renaissance: beginnings in Egypt, Greek drama, Roman theatre, Medieval drama, effects of the Renaissance.		2	3			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.12.08 Drama from 1600 to present: in England, on the Continent, in Asia.		2	3			
3.12.09 Drama in the United States: colonial America, nineteenth century, twentieth century.		2	3			
3.12.10 Shakespeare, the playwright.		2	3			
3.12.11 Shakespearean plays: structure, characters, language, chronology of the plays, stage craft.		2	3		2	3
3.12.12 Recent developments in motion pictures: the wide screen, internationalization, movies on television, special categories of films, organizations representing the film industry.	1	2	3	2	3	3
3.12.13 The art of film making: the key people, work behind the scenes, the film itself, general production procedures.		1	2	2	3	3
3.12.14 Motion picture acting: technical limitations, general acting procedures.		1	2			
3.12.15 Film pedagogy: sources of information about movies, seeing films in school, objectives of movie study.	1	2	3			
3.12.16 Radio techniques, history of radio.			1			

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist
3.12.17 The development of television: technical background and programming.		1	2			
3.12.18 Television drama: acting on television, producing a television play.		1	2			
3.12.19 The future of television: new developments, training opportunities, educational television, television's future influence.		1	2			
3.12.20 Pantomime.	1	2	3	2	2	3
3.12.21 Voice and diction.	2	3	4	2	3	3
3.12.22 Creating a character: analysis of a role, leading and supporting roles, special skills, interpreting scenes.	2	2	6	2	3	3
3.12.23 Acting terminology, acting techniques, building acting techniques, rehearsing, putting on a one act play, acting in Shakespearean plays, acting in the round.	1	2	6	2	3	3
3.12.24 Play production and the production staff.	1	3	4			

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist
3.12.25 Pre-rehearsal activities: choosing a play, securing the production rights, planning the production, making the promptbook, casting the play.	1	3	4			
3.12.26 Rehearsing: reading, blocking, polishing, crew, working, and dress rehearsals.		2	4			
3.12.27 Scenic design: stage terminology, the evolution of scenic design, contemporary scenic design.		2	4			
3.12.28 Procedures in scenic design: basic principles, model settings, the use of color, set backgrounds, scene shifting, summary of procedures.		2	4	2	3	3
3.12.29 Stage lighting: lighting terminology, necessary equipment, special equipment, planning the lighting, regulating the lights.		2	4	2	3	3
3.12.30 Costume: effective costuming, costume design, obtaining the costumes, care of costumes.	2	2	4	2	3	3
3.12.31 Make-up: the make-up kit, make-up principles and procedures, special make-up problems.	2	2	4	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.12.32 Dramatic criticism: evaluating a play, appraising school productions.		2	6	2	3	3
3.12.33 Acceptance of self and others through participation in play production.				2	2	4
3.12.34 Recognition of drama as an excellent medium for the release of emotions.				2	2	4
3.12.35 Expression of fantasy through the controlled medium of dramatic art.				2	2	4
3.12.36 Appreciation of the fact that good plays introduce viewers to places and people different from themselves, yet are universal enough for the viewer to find identification.				3	3	4
3.12.37 Appreciation for the enrichment of the lives of people who actively recreate in drama.				2	3	4
3.12.38 Appreciation for the knowledge gained about human behavior--man's actions and reactions through drama.				3	3	4
3.12.40 Appreciation of drama as a means of satisfying a need for adventure.				2	2	2

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.12.41 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.12.42 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5
3.12.43 Openness and receptiveness to new ideas.				2	5	5
3.12.44 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5
3.12.45 Sensitivity to the needs, interests, and capabilities of individual students.				2	5	5

3.13 Performance Specifications--Listening

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.13.01 Components of the listening process and the variety of ways and levels in which people listen, e.g., passively, appreciatively, attentively, analytically.	2	4	6	2	3	3
3.13.02 Standards by which discussions and conversations are judged, responding appropriately, discriminating between thoughts and ideas, clarifying, etc.	2	4	6	2	3	3
3.13.03 The spoken word in terms of audience, speaker, and purpose.	2	5	6	2	3	4
3.13.04 Interpretative listening activities such as the choral speaking of poetry, oral reading of literature, dramatization of plays, role playing, socio-drama, creative dramatics.	2	3	6	2	3	3
3.13.05 Role of listening in the communication process.	2	3	5			
3.13.06 Organizational patterns of speeches, reports, etc.	2	3	6	2	3	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.13.07 The spoken word to determine main ideas and supporting details, to determine whether ideas are supported by reasons, facts, examples, or illustrations and to decide whether the conclusion is clearly drawn.	2	3	6	2	3	4
3.13.08 Propaganda devices, faulty logic, loaded words, appeals to emotion rather than reason, half truths, omissions and quoting out of context, and ability to evaluate their use in spoken language.	2	5	6	2	4	5
3.13.09 Appreciation of the arts through effective listening.	2	3	5	2	3	3
3.13.10 The interaction process and its relation to effective listening.	2	4	6	2	5	5
3.13.11 Barriers to effective listening and the communication that occurs without the spoken word (non-verbal communication, below surface messages, etc.).	2	4	6	2	3	3
3.13.12 Statements received from various audio sources in order to make inferences or raise questions consistent with the informational content supplied by these sources.	2	4	6	2	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.13.13 Analyzing, comparing, and synthesizing the meaning of the spoken word.	2	5	6			
3.13.14 Organizing spoken messages into logical structures and understandable wholes.	2	5	6			
3.13.15 Criticizing and refining words spoken for the purpose of clarity, emphasis, and increased understandability.	2	5	6			
3.13.16 Techniques of problem solving to the speaking process: defining a problem, assessing a situation, using judgment in selecting ideas.	2	5	6			
3.13.17 The spoken word to determine such characteristics as substantial and relevant content, organization, clarity, appropriateness of tone and usage.	2	5	6			
3.13.18 Analysis of the strengths and weaknesses of the spoken word and communicating this analysis effectively.	2	5	6			
3.13.19 Recognition of the importance of an accepting atmosphere.	3				5	5

Characteristic	Level of Development Cognitive Teaching Assistant	Cognitive Teacher	Cognitive Specialist	Affective Teaching Assistant	Affective Teacher	Affective Specialist
3.13.20 Recognition of the value of listening attentively.	3				5	5
3.13.21 Acceptance of the importance of having purposes for listening and reasons for asking questions when necessary.	3				5	5
3.13.22 Willingness to talk over what has been heard and to repeat important points covered in order to insure accuracy of listening.	3				5	5
3.13.23 Viewing listening as an essential tool of learning--one that can bring much knowledge if used to the fullest advantage.	3				5	5
3.13.24 Value for the individual and willingness to listen to what others have to say.	3				5	5
3.13.25 Openness and receptiveness to the presentation of ideas.	3				5	5
3.13.26 Developing meaningful situations which aid the child in thinking, feeling, speaking, and writing precisely and sensitively.	2	6	6	2	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.13.27 Respect and appreciation for the role of the language arts in the development of effective communication and human relations.				2	5	5
3.13.28 Sensitivity to the needs, interests, and capabilities of individual students.				2	5	5
3.13.29 Creating a classroom climate free from pressure and from inhibition and fear.	2	6	6	2	5	5
3.13.30 Correlation of the contents and skills of listening, speaking, reading, and writing with one another and with other subjects in the curriculum.	1	5	6			
3.13.31 Helping children to become open, responsive individuals and helping them to respond critically and constructively to one another.	1	5	6	2	5	5
3.13.32 Semantics: symbolic nature of language, denotation and connotation, the use of propaganda, bias, emotional appeal, generalization, satire, etc.	2	4	6	2	4	4

3.14 Performance Specifications--Mathematics

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.14.01 Sets of whole numbers, integers, rational numbers, and real numbers, and relations and operations for each set.	3	6	6	2	3	3
3.14.02 Historical development of systems of numeration.		3	6		2	3
3.14.03 Algorithms for the sets of whole numbers, integers, rational numbers, and real numbers and the rationale for each.	3	6	6	2	3	4
3.14.04 Whole numbers, the system of integers (as an example of an integral domain), rational numbers, and real numbers as mathematical systems and the properties of each system.		3	6		2	4
3.14.05 Physical interpretations of the operations and algorithms for the whole numbers, integers, rational numbers, and real numbers.	2	4	6	1	2	3
3.14.06 Basic ideas of number theory.	2	6	6	2	3	5
3.14.07 Distinction between number and numeral.	1	3	6	1	2	4
3.14.08 Numeration systems in base two, base five, and base twelve.		3	6		2	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.14.09 Materials and devices which can be used by children in studying whole numbers, integers, rational numbers, and real numbers and their relations and operations.	1	3	6	1	3	5
3.14.10 Development stages through which children pass in coming to an understanding of numbers.		3	6		3	4
3.14.11 Methods of presenting, explaining, and rationalizing algorithms for the whole numbers, integers, rational numbers, and real numbers and computational procedures involved in number theory.		3	6		3	5
3.14.12 Curricular materials in mathematics for the elementary school.		3	6		3	3
3.14.13 Computation skills with whole numbers, integers, rational numbers, and real numbers.	3	6	6	2	2	2
3.14.14 Techniques in recognizing and eliciting from children reasoning processes about whole numbers, number theory, integers, rational numbers, real numbers, and geometric entities and operations.		4	6		3	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.14.15 Techniques in devising and presenting abstract and physical examples which communicate the nature of geometric entities and the operations which may be performed on them.		3	6		2	3
3.14.16 Techniques for devising and presenting abstract and physical examples which communicate the nature of whole numbers, integers, rational numbers, real numbers, and the rationale of their related algorithms.		3	6		3	3
3.14.17 Basic facts and definitions of plane and solid geometry.	2	3	6	2	2	3
3.14.18 Inductive and deductive development of basic facts and definitions of plane geometry.		2	6		2	3
3.14.19 Historical development of geometry.		3	6		2	2
3.14.20 Elementary compass and straight edge constructions.	2	6	6	2	2	3
3.14.21 Geometrical manipulations.	2	6	6	1	2	3
3.14.22 Techniques for using a variety of computing devices (ancient and modern) to clarify algorithms and the solution of problems, to provide motivation, and to illustrate the historical development of computing machines.		2	5		2	2

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.14.23 Basic ideas of measurement including standard units of measure, their history, and the arbitrary nature of units.	1	6	6	1	3	3
3.14.24 Techniques for developing concepts of measurement in the classroom.	3	6	6	1	2	2

3.15 Performance Specifications--Science

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.15.01 Conceptual framework of science.		2	6	2	3	5
3.15.02 History of science.		3	6	1	3	5
3.15.03 Methods of scientific inquiry.		3	6	1	4	5
3.15.04 Interrelationships of the three branches of science--biological, physical, and earth.		3	6		3	5
3.15.05 Basic content of the biological sciences including kinds of organisms, functioning of organisms, growth and development of organisms, and interrelationships of organisms and environment.		3	6		3	5
3.15.06 Basic content of the physical sciences including measurement and experimental errors, kinematics in one and two dimensions, dynamics of a particle, conservation principles, structure of matter, origins of the atomic theory, descriptive chemistry, heat phenomena, waves, electric and magnetic fields, chemical bonding, chemical reactions, and nuclear energy.		3	6		3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.15.07 Basic content of the earth sciences including the origin of the earth, the origin and distribution of continents and oceans, geochronology and the history of the earth, origin and distribution of the elements, sources of the earth's energy, origin of the earth's atmosphere, evolution of life on earth, and economic utilization of earth materials.		3	6		3	5
3.15.08 Contributions of science to society.		3	6	1	3	5
3.15.09 Philosophy of science.		2	6		2	5
3.15.10 Purposes for teaching science in the elementary school.		3	6		3	5
3.15.11 Nature of learning.		3	6		3	5
3.15.12 Patterns of human growth and development.		3	6		3	5
3.15.13 Methods and materials appropriate for teaching science to children.	1	4	6	1	3	5
3.15.14 Techniques for evaluating instructional procedures and pupil progress in science.		3	6		3	5
3.15.15 Resources available for the elementary school science program.	1	3	6	1	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.15.16 Curricular programs for elementary school science.		3	6		3	5
3.15.17 Current research related to elementary school science.		2	6		2	5
3.15.18 Innovative programs and practices in elementary school science.		2	6		2	5
3.15.19 Techniques for designing, conducting, and evaluating innovative projects in elementary school science.		2	6		2	5
3.15.20 Selection of science equipment, teaching facilities, and instructional materials.		2	6		2	5
3.15.21 Use of science equipment and supporting instructional materials.	1	3	6	1	3	5
3.15.22 Techniques for conducting field studies.		3	6	1	3	5
3.15.23 Identifying and evaluating instructional objectives.		3	6		3	5
3.15.24 Techniques for conducting demonstration lessons.		2	6		3	5
3.15.25 Working with other teachers for improved science instruction.		2	6		3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.15.26 Appreciation for the methods of scientific inquiry.					3	5
3.15.27 Enthusiasm for stimulating and maintaining children's curiosity about their environment.				2	3	5
3.15.28 Desire to promote divergent and creative thinking.				1	3	5
3.15.29 Willingness to practice a scientific attitude in classroom activities.				1	3	5
3.15.30 Enthusiasm for open-ended activities.				1	3	5
3.15.31 Acceptance of a child's changing view of his physical world.				2	4	5
3.15.32 Willingness to have children assume an active role in learning experiences.				2	4	5
3.15.33 Enthusiasm for translating research findings into classroom practices.					2	5
3.15.34 Appreciation of the need for educational research and innovative programs in elementary school science.					2	5

3.16 Performance Specifications--Art

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.16.01 Creative art experiences.		2	4		3	5
3.16.02 Personal expression through various art media.		2	5		3	5
3.16.03 Criteria for making aesthetic judgments and evaluation.		3	6		3	5
3.16.04 Relationship of art to the development of society.		2	4		2	4
3.16.05 Art history in a social, political, and humanistic context.		2	4		2	4
3.16.06 Personal aesthetic standards applied to the individual's environment.		3	6		3	5
3.16.07 Individual participation in artistic enterprises.		3	4		3	4
3.16.08 Responsibility for the development and support of community art activities.		3	3		4	5
3.16.09 Responsibility for improving the visual environment.		2	3		4	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.16.10 Receptivity to new and old experiences.		2	3	3	4	5
3.16.11 Provide experiences appropriate to the pupil's abilities.	1	3			3	4
3.16.12 Aesthetic values.		2	4		4	5
3.16.13 Diagnosis of children's behavior resulting in appropriate learning experiences.		4	4		3	3
3.16.14 Acceptance of a certain amount of pupil vagueness, indecision, and uncertainty.		2	4		3	4
3.16.15 Development of appropriate pupil art experiences.		3	5		2	4
3.16.16 Scope and sequence of the art curriculum and its relationship to the total school program.		2	6		2	3
3.16.17 Specialization in at least one art media.			6			5
3.16.18 Pupil and materials and their uses.	1	3	4	2	2	3
3.16.19 Classroom organization procedures.	2	3	5	2	2	3

3.17 Performance Specifications--Music

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.17.01 Rhythm as a basic element in music including time, meter, and tempo as intrinsic parts.	2	3	6	2	3	5
3.17.02 Melody as a series of tones with tonality organized within the traditional scale and using the basic texture typings.	2	3	6	2	3	5
3.17.03 Harmony as derived from the almost simultaneous sounding of two or more tones including form, expression, coloring, and balance.	2	3	6	2	3	5
3.17.04 Response and value for music as an integral part of the better life.	2	4	6	2	3	5
3.17.05 Notational symbols and graphic representations used to designate pitch, rhythm, tempo, style, dynamics, tonality, form, etc.	2	3	6	2	3	5
3.17.06 Application and interpretation of the notational systems.		3	6		3	5
3.17.07 A value system for musical notational systems to properly communicate the artist's (composer's, arranger's) intentions.	2	3	6	2	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.17.08 Major music periods, composers, styles, dance and literature attachments, religious significance, commercial use, etc.	2	3	6	2	3	5
3.17.09 Musical skill and value for music as a real interpersonal part of our lives with tradition as part of its heritage.	2	3	6	2	3	5
3.17.10 A value system in music incorporating learned criteria dependent on aesthetic development of the individual.	2	3	6	2	3	5
3.17.11 Techniques to evaluate musical performance on the basis of the technical and mechanical skills involved.		3	6		3	5
3.17.12 An attitude toward music that will allow appreciation of music for its intrinsic values.	2	3	6	2	3	5
3.17.13 Understanding and application of the basic principles involved in voice production, keyboard, wind, string, and percussion instruments.	2	3	6	2	3	5
3.17.14 Ability to perform vocally and instrumentally in music.	2	3	6	2	3	5

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Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.17.15 An attitude of real appreciation for musical performance and the skill demonstrated by the performer.	2	3	6	2	3	5
3.17.16 Specifics of music that evoke physical and emotional response.	2	3	6	2	3	5
3.17.17 An attitude of receptiveness and value for music and musical representations demonstrated by physical and emotional response.	2	3	6	2	3	5
3.17.18 The constructs of music and of musical interpretation.		3	6		4	5
3.17.19 Skills and attitudes needed to involve oneself in the creation, improvisation, and interpretation of music.	2	3	6	2	5	5
3.17.20 Experiences in musical performance to establish value criteria and to be generally knowledgeable of musical history and structure.	2	3	6	2	5	5
3.17.21 The various music-producing instruments (including human voice) and the tonal color and quality of each in concert or solo.	2	3	6	2	4	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.17.22 Techniques to evaluate and use criteria for judging musical performance.	2	3	6	2	4	5

3.18 Performance Specifications--Health

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.01 Major body parts and functions (organs, systems, etc.).	2	4	4	3	3	3
3.18.02 Human embryology.	3	4	4	3	3	3
3.18.03 Components that exert influence on growth and development (biological inheritance, mental traits, cultural inheritance).	2	4	4	3	3	3
3.18.04 Basic principles of healthful living affecting individual, community, and national as well as international concern.	3	4	4	3	3	3
3.18.05 Current data relating to health problems and their solution.		3	6			
3.18.06 Emerging health problems of society exhibited in natural or emergency situations.		2	4			
3.18.07 Human and environmental causal factors related to accident occurrence and measures of accident prevention.	3	6	6	2	2	2
3.18.08 Emergency techniques and procedures for spontaneous application when needed.	3	3	6	3	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.09 Recognition of health hazards and anticipation of accidents.	3	4	6			
3.18.10 Communicable diseases, manner of transmission, process of control, prevention techniques, and treatments.	3	3	6		3	3
3.18.11 Nature of disease transmission, germ theory, and available immunizations.		3	6			
3.18.12 The nature of illness with its inherent physical and emotional complexities.		3	6			
3.18.13 Environmental factors which intensify conditions for the spread of disease and which deter disease dispersion.		3	6			
3.18.14 Venereal disease, transmission and social implications.	3	3	3			
3.18.15 Health habits which afford protection from disease.	3	3	6			
3.18.16 Scientific research contributing toward disease control.		3	6			
3.18.17 Diseases due to body dysfunction.		3	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.18 Signs and symptoms of disease through observation of behavior and appearances.	2	3	6			
3.18.19 Causal factors in deviant behaviors.	2	4	6	3	3	3
3.18.20 Relationship between man, disease, and environment.	2	4	6	3	3	3
3.18.21 Societal functions of the family unit in perpetuation of life and maturation of its young.	3	4	4	3	3	3
3.18.22 Male and female reproduction systems and interrelationships during conception and reproduction.	4	4	4			
3.18.23 Masculine and feminine social roles and sex identification as influenced by cultural expectancies and social strata.	3	4	4	3	3	3
3.18.24 Similarities and differences in development of male and female from infancy to adulthood.	3	4	4			
3.18.25 Cultural influence on dating, mate selection, family interaction, and parenthood.		4	4	3	3	3
3.18.26 Factors influencing the development of personality and methods of personality improvement.	2	4	4	3	3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.27 The sex drive: its influence, purpose, appropriate expression, and problems related to its control.	4	4	4			
3.18.28 Problems inherent in social relationships with emphasis upon boy-girl relationships.	2	4	4	3	3	3
3.18.29 Normal and abnormal patterns of psycho-sexual development and behaviors.		4	6			
3.18.30 Conflicting viewpoints toward controversial health topics inherent in societal structures.		2	4			
3.18.31 Substances that modify mood and behavior with habit-forming or addictive potential.	2	4	4			
3.18.32 Understanding of self-behavior and the factors contributing to value concepts, family interrelationships, and sexuality.	4	4	4			
3.18.33 Proper selection and use of food, its importance to the maintenance of health, and psychological and social factors in eating patterns.	3	4	4			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.34 Basic components of physical, mental, social, and spiritual fitness.	3	4	6			
3.18.35 Relationship between good health habits and effectiveness of the individual.	3	4	6			
3.18.36 Criteria for sound health decisions.	3	5	6			
3.18.37 Concept formation during sequential growth steps.		4	4	3	3	3
3.18.38 Sequential patterns of growth development for the elementary aged child in physical, mental, social, and emotional patterns.		4	4	3	3	3
3.18.39 Translation of health information into pupil vernacular and meaningful experiences.	5	5	5			
3.18.40 Principles of group dynamics and interaction.	3	3	6	3	3	3
3.18.41 Somatotypes and potentialities in physical endeavors.		4	4			
3.18.42 Psychology of the normal and exceptional child.	3	4	4			
3.18.43 Counseling and guidance techniques for the elementary child.	3	6	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.44 Sociograms, interpretations of findings, and practical application of results.		6	6			
3.18.45 Needs, interests, and concerns inherent in the pupil's composition which affect the learning process.		4	6		2	2
3.18.46 Emotional behaviors and social implications which evolve within the peer group.		3	6			
3.18.47 Postural defects and their correction.	2	3	6			
3.18.48 Motivation of pupils toward self-appraisal, acceptance, and improvement.		5	5			
3.18.49 Essentials for the school health program involved in prevention and protection of individuals, as well as service for immediate health needs.	3	3	6			
3.18.50 Essentials for community health programs at both local and international levels.	3	3	6			
3.18.51 Methods for favorably influencing knowledge, attitudes, and practices relating to health.	3	3	3			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.52 Personnel requirements, facilities, operating costs, and effective methods of acquisition of the essentials for a successful health program for the school and community.			6			
3.18.53 Contributions of official, professional, voluntary health agencies, and community agencies to a total health program and means of working cooperatively with the various agencies to accomplish desired goals.	3	3	5			
3.18.54 Professional career opportunities in health areas and related fields, educational requirements and qualifications, and ensuing responsibilities.			5			
3.18.55 Means and media to use as vehicles for accomplishing the objectives of health programs.	2	4	6			
3.18.56 Cooperative means for working with members of the school staff, parents, children, and the aggregate community toward establishing a healthful environment and providing health services for the pupils.		3	3			
3.18.57 Emergency techniques and procedures in care of injured and ill pupils.	3	3	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.58 Efficient techniques of maintaining accumulative health records of individual pupils.	3	6	6			
3.18.59 Curriculum construction adapted to the needs, interests, and abilities of the children.		6	6			
3.18.60 Accident prevention techniques, teachings, and practices for the classroom, playground, gymnasium, bathrooms, laboratories, and routes to and from school.	3	3	6	3	3	3
3.18.61 Emotional factors within the child or group which contribute to risk-taking or effect intelligent reasoning and actions.	3	4	6	3	3	3
3.18.62 Methods which promote attitudes within the child of personal responsibility for safety and awareness of hazards in his personal environment.	3	5	6			
3.18.63 Signs and symptoms of childhood diseases and disorders.	3	3	6			
3.18.64 Legal mechanisms involved with disease control and implications for voter education as a vehicle to accomplish desired goals.		3	6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.65 Characteristics of optimum child health and important points of observation for detection of deviations in appearance and behavior.	3	3	6			
3.18.66 Factors contributing to maintenance of equilibrium with environment and factors which disturb this equilibrium.			4			
3.18.67 Varieties of teaching techniques and aids in transmitting knowledge through visual and auditory senses.	3	5	5			
3.18.68 Screening devices and their effectiveness, administration, and utilization.		6	6			
3.18.69 Disease control, nutrition, dental, visual, and hearing programs of instruction and action recommended for the educational community.	2	5	6			
3.18.70 Medical and psychological examinations, their value, and practical application.	2	4	4			
3.18.71 Practices, habits, and skills which contribute to decision-making in areas of personal health.	3	3	3			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.18.72 Influential forces within adult society, peer group, advertising and communication media, and social class which conflict with or enhance health teachings.		4	4			
3.18.73 Products available as remedies and cures, superstitions, and scientific guidelines for the consumer.		3	6			
3.18.74 Classification and services of physicians and specialists with proper selection guides for consultation and treatment.		3	4			
3.18.75 Correlations of research statistics and findings with health knowledges.		4	6			

3.19 Performance Specifications--Physical Education

	Level of Development								
	Cognitive			Affective			Motor		
Characteristic	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.19.01 Neuro-muscular system.		3	6		2	3			
3.19.02 Pupil's physical limitations and individual differences.		3	3		3	3			
3.19.03 Neuro-muscular skills such as running, jumping, kicking, striking an object with a racket or bat.	2	3	5	1	3	3	1	2	3
3.19.04 Techniques for developing pupil strength and endurance.		2	5					1	3
3.19.05 Evaluation of pupils through observation.		4	6						
3.19.06 Techniques of developing democratic living through play and learning activities.	1	3	4	2	3	5			
3.19.07 Kinesiology.			5						
3.19.08 A wide range of physical activities for pupils (e.g., rhythms, dances, games, team sports).	1	3	5		3	3	1	2	3

Characteristic	Level of Development Cognitive Teaching Assistant	 Teacher	 Specialist	 Affective Teaching Assistant	 Teacher	 Specialist	 Motor Teaching Assistant	 Teacher	 Specialist
3.19.09 Physical activities and their appropriateness to individual physical growth patterns.		3	5		3	4			
3.19.10 Measurement and evaluation of pupil physical skills.		3	5						
3.19.11 Identification of pupil interests and needs.		4	6		3	3			
3.19.12 Human anatomy and physiology.		3	5						
3.19.13 Progressive sequence of physical activities to develop appropriate skills.		2	5		2	3			
3.19.14 Techniques for working with groups of varying sizes in different physical surroundings.		3	4						
3.19.15 Human growth and development.		3	4		3	3			
3.19.16 Techniques for developing appropriate social behaviors through physical activities.		3	5		2	3			
3.19.17 Techniques for developing individual self-confidence.		3	5		3	3			

Characteristic	Level of Development								
	Cognitive			Affective			Motor		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.19.18 Pupil long-range recreational pursuits.		2	4		2	3			
3.19.19 Procedures for developing positive attitudes toward winning and losing.				2	4	5			
3.19.20 Physical fitness.	2	2	2	2	3	3	1	1	1

3.20 Performance Specifications--Philosophy

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.20.01 Prescriptive and descriptive statements.		3	3			
3.20.02 Various philosophers' ideas of the most important element in judging moral worth (Kant, Epictitus, Berthon, Dewey, etc.).		4			3	
3.20.03 Conclusions versus reasons, or theory and its justification.		4				
3.20.04 The complexity of moral life and the need to distinguish between descriptions and prescriptions, motives and consequences, means and ends, intrinsic and extrinsic goods, in judging the moral worth of an action.		4			3	
3.20.05 The terms "religion" and "god."	3	4				
3.20.06 Strengths and weaknesses of the various arguments for God's existence (ontological, casual, contingency, religious experience, utility, miracles, teleological).		6			3	
3.20.07 Religious concepts and meanings (anthropomorphic and mystic approaches to conceptualization of God).		4				

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.20.08 Consequences, or lack thereof, of the belief of the existence of God.		4				
3.20.09 Problems posed by the actual existence and nature of objects around us which we "know" of through sight and touch.		4				
3.20.10 Principle proponents of the theory of representative realism, particularly as expressed by John Locke.		2				
3.20.11 Berkeley's own statement on idealism and his refutation of Locke's position.		4				
3.20.12 The phenomenalistic position regarding the apprehension of reality (John Stuart Mill).		4				
3.20.13 Avenues by which we are enabled to know propositions to be true (sense experience, reason, authority, revelation, and faith).		4				
3.20.14 Defining characteristics of the word "know."		4				
3.20.15 Basic tenets and implications of Pragmatism, especially as set down by William James and John Dewey.		4				

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.20.16 Logical empericism and related movements with particular emphasis on A. J. Ayer.		4				
3.20.17 The existentialist movement and an overview of some of its ramifications (J. P. Sartre, Camus, etc.).		4				
3.20.18 The problem of substance and the problem of universals (Plato, Aristotle, Locke).		4				
3.20.19 The problem of matter and life (mechanism and vitalism).		4				
3.20.20 The relationship and difference between mental and physical events (interactionism, psychological parallelism, epiphenomenalism, the double aspect theory, identity theory).		4				
3.20.21 Problems connected with the concepts of self, personal identity, and immortality.		4				
3.20.22 The method philosophers use to dissect and clarify the exact meaning of the problems which they face (logic principles and linguistic analysis).		2			3	
3.20.23 Perennial themes discussed by philosophers (truth, knowledge, goodness, etc.) and why they are both perennial and important.	1	1		3	3	

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.20.24 The number and the variety of alternative ways for answering problems.				3	3	
3.20.25 Acceptance of the fact that philosophy neither offers any "final" answers nor claims the existence of such.				3	3	
3.20.26 Thoughts of the great thinkers with particular emphasis on the more recent ones.	1	4		3	3	
3.20.27 One's personal beliefs--continual strengthening, questioning, and renewing of one's basic convictions.				5	5	
3.20.28 Intelligent use of words as words, e.g., the relationship of words in our language to the world in which language is used to describe it (semantics).	3	4				
3.20.29 Understanding and definition of words--theories of definition (ideational, behavioral, referential, usage).	3	5				
3.20.30 Meaningful sentences (imaginability, describability, truth conditions, "knowing what it's like," meaninglessness outside a given context, category mistakes, self-contradictoriness, untranslatable metaphors).	3	5		2	2	

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.20.31 Recognition of the reasoning process being employed in a particular situation (deduction, induction).	3	4		2	2	
3.20.32 Classification of propositions (a priori and a posteriori proposition, and analytic and synthetic statements).		4				
3.20.33 Isolation within a proposition or an argument of the principles of logic--discernment of whether or not any principles have been violated (Aristotle's three laws of thought: Law of Identity, Law of Non-contradiction, Law of Excluded Middle).		6				

3.21 Performance Specifications--Religion

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.21.01 Each religion's land of origin, its people and language, culture, and its historical beginnings.		1	1			
3.21.02 The basic sacred writings of each religion.		1	1			
3.21.03 The life and teachings of known founders of a religion.		1	1			
3.21.04 Comparison of religions in common terms:		2	2			
1. Cosmos--creation and nature of the world.			2			
2. Metaphysics--views of the supernatural.			4			
3. Man--position of man, and views each religion has of him.			4			
4. Man's plight--causes of plight.			4			
5. Salvation--teachings for a meaningful life.			2			
6. Conduct--content of ethical living and relationship of conduct with rest of world view.			4			
7. Eschatology--fate after death.			4			
3.21.05 Understanding of the roads to knowledge and ability to validate each one.			6			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.21.06 Recognition of real knowledge:						
1. Statements of truth.			4			
2. Statements of faith.			4			
3. Statements of evidence to convince one of truth.			6			
3.21.07 Understand and define words.			2			
3.21.08 Distinction between defining characteristics and accompanying characteristics.			4			
3.21.09 Understanding of certain basic religious concepts such as anthropomorphism and mysticism.			2			
3.21.10 Distinction between various meanings of the term "religion."			4			
3.21.11 Ability to view the study of religion objectively and scientifically.			6			
3.21.12 Recognition of human motives behind "odd" beliefs of other religions.						3
3.21.13 Religious objectivity.						5
3.21.14 Appreciation for others' beliefs, answers, or positions to philosophical questions.						3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.21.15 Realization that religion is individual, personal, and non-prescriptive.						4
3.21.16 Understanding that religion is largely shaped by a socio-economic culture.						3
3.21.17 Ability to project and hypothesize about the future of religion.						3

3.22 Performance Specifications--Media

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.22.01 Media materials: projected, recorded, broadcasted, programmed, displayed, printed materials, etc. (including care and storage of materials).	2	2	2			
3.22.02 Available media for instruction, bibliographic sources for printed and non-printed media materials, regional resources, material catalogues such as the _NICEM Directory of 16 mm Educational Films_, the _NICEM Directory of 35 mm Educational Filmstrips_, the _Educational Media Index_, and the _Children's Catalogue_.	2	3	3			
3.22.03 Operating principles and conditions of use of conventional audio-visual equipment, tape recorders, language masters, record players, filmstrip projectors, overhead and opaque projectors, previewers, etc.	3	3	3			
3.22.04 The role of the medium in the communication of a message, e.g., selection of the most appropriate medium or media to present a concept.	3	3	6	2	3	5
3.22.05 Media terminology used to designate equipment, materials, techniques.	2	2	2			

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.22.06 Methods for organizing, utilizing, judging, studying, and criticizing media.	2	3	5	2	3	3
3.22.07 Curriculum trends as related to the adaptation of educational media and communication technology to certain aspects of instruction such as inductive learning strategies, self instruction, etc.		3	6		3	3
3.22.08 Principles and generalizations in psychology, learning theory, subject areas, etc., and their application to a range of teaching-learning situations related to the use of media.		3	5		3	3
3.22.09 Rules of procedure and generalized methods in the selection, use, and adaptation of various media to specific situations.		3	5		3	3
3.22.10 Analysis of elements in a communications medium, e.g., recognition of unstated assumptions, bias, validity, etc.		3	4		3	3
3.22.11 Adaptation, modification, and combination of various media to develop instructional sequences.		5	6		3	3

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.22.12 Construction and development of instructional materials which convey ideas, illustrate concepts, support instructional objectives, etc.		5	5		3	3
3.22.13 The value of media and methods of use for given instructional purposes, e.g., the preparation of a unit of work incorporating instructional objectives, content, media, methods, and evaluation.		6	6		3	3
3.22.14 Quantitative and qualitative judgments about the extent to which material and methods satisfy instructional objectives.		6	6		3	3
3.22.15 The value of equipment and materials in a given school situation--recommendation for use and purchase.		5	6		3	3
3.22.16 Techniques of modifying existing materials to special purposes.		3	6		3	3
3.22.17 Development of inservice programs in media.			6			5

3.23 Performance Specifications--Guidance & Counseling

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.23.01 Study of the historical and philosophical foundations in guidance and counseling.		3	6		3	4
3.23.02 Overview of educational-psychological testing and measurement.		4	6	1	3	4
3.23.03 Educational, psychological, and sociological dynamics of behavioral characteristics of children: personality dynamics, mental hygiene, learning theories, environmental manipulation, concepts from vocational development theory, and understanding of child development.		4	6	2	3	4
3.23.04 Internal and external social and economic forces that relate to the development of the child.	2	4	6	2	3	5
3.23.05 Counseling theories: command of the counseling aproaches applicable to the elementary child.		2	6		2	5
3.23.06 Counseling techniques involving developmental play, role-playing, audio-visual feedback, etc.		2	6		2	4

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.23.07 Group procedures that would include group guidance and group counseling.		2	6		3	4
3.23.08 A counseling practicum wherein the professional student receives professional laboratory experiences.			6		3	5
3.23.09 Ability to work with exceptional children.	2	3	6	2	3	5
3.23.10 Community resources for referral purposes.	2	4	6	3	3	5
3.23.11 Understanding of the research methods and tools instrumental in guidance and counseling.		3	6		3	5

3.24 Performance Specifications--Social Foundations of Education

Characteristic	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.01 Role of both heredity and environment in the development of the individual.	2	3	6	3	4	5
3.24.02 Various cultures and the ways in which they influence individuals to develop particular types of behavioral characteristics.	2	3	6	3	4	5
3.24.03 Socio-cultural controls needed to maintain social stability.	2	3	6	3	4	5
3.24.04 Major social changes which can be found in modern society (local, national, international).	2	3	6	3	4	5
3.24.05 Processes of planned social change and individual and group roles in this process.	2	3	6	2	3	5
3.24.06 Methods to structure situations in which pupils can assess the ways in which social values and norms operate to control an individual's behavior.	2	3	6	2	3	5
3.24.07 Appropriateness and consequences of various types of social and/or educational changes.	2	3	6	2	3	5
3.24.08 Appropriate channels for achieving planned social change.	2	3	6	2	3	5

Level of Development applies to the Cognitive and Affective columns.

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.09 Basic principles of democracy, respect for the individual, valuing of diversity, freedom of speech, equality of opportunity, government of, by, and for the people, etc.	2	4	6	3	4	5
3.24.10 Cooperative decision-making processes and the role vested interests play in this process.	2	4	6	2	4	5
3.24.11 Social responsibilities of the individual citizen.	3	6	6	5	5	5
3.24.12 Procedures for evaluating beliefs and behavior to determine the extent to which they are consistent with democratic principles.	2	4	6	2	3	5
3.24.13 Devotion to the basic principles of democracy in classroom operations.	3	6	6	5	5	5
3.24.14 Faith in the power of cooperative discussion and the use of reason to settle problems.	3	6	6	5	5	5
3.24.15 Willingness to utilize basic principles of democracy in classroom operations.	3	6	6	5	5	5
3.24.16 Respect for the uniqueness of each pupil and willingness to assist each one in developing a positive self-concept.	3	6	6	5	5	5
3.24.17 Purposes of education in a democratic society.	3	6	6	3	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.18 Various types of development (physical, social, moral, emotional, intellectual, and vocational) which public schools seek to promote.	3	6	6	3	5	5
3.24.19 Historical and current educational, political, and economic procedures that affect the public schools.	2	3	6	2	3	5
3.24.20 Various patterns of curriculum and instructional organization.	2	3	6	2	3	5
3.24.21 Professional organizations and other interest groups and the role they play in school program development.	2	3	6	2	3	5
3.24.22 Critical factors which underlie significant problem situations and educational strategies for preparing youth to cope with these problems.	2	3	6	2	3	5
3.24.23 Sensitivity to social factors and forces which influence the development of public education.	2	3	6	3	5	5
3.24.24 Willingness to examine and evaluate the issues which are rooted in current educational problems.	2	3	6	3	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.25 Openness to new theories of educational development and a willingness to evaluate them in an objective manner.	2	3	6	3	5	5
3.24.26 Relationship between the characteristics of a given group and the behavioral patterns of its various members.	2	3	6	3	5	5
3.24.27 Significant factors, social class, status, power, etc., and the ways in which they influence educational attitudes and practices.	2	3	6	3	5	5
3.24.28 Significant forces, science and technology, mass media, special interest groups, the national government, teachers' unions, etc., and the ways in which they influence educational attitudes and practices.	2	3	6	3	5	5
3.24.29 Significant social phenomena, the population explosion, rising expectations, the technology explosion, urban growth, sexual revolution, the generation gap, integration, etc., and their implications for educational program development.	2	3	6	3	5	5
3.24.30 Major changes which have characterized the development of primary group units such as the family and secondary group units such as the school.	2	3	6	3	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.31 Techniques for collecting, analyzing, and interpreting data relating to the several factors that have and will shape public school education.		3	6			
3.24.32 Various educational alternatives toward social change (neutrality, rejection, acceptance) and different responses related to these alternatives (e.g., acceptance--social realism→social reconstructionism).	1	3	6	2	3	5
3.24.33 Techniques for assessing the potential of various community resources in relation to changing a school's role in a given community and of procedures for enlisting the support of various community agencies to achieve desired changes.		3	6		3	5
3.24.34 Historical, descriptive, and experimental methods of data collection, analysis, and interpretation.	2	3	5	3	3	5
3.24.35 Techniques for observing and assessing interaction patterns in various group situations.	2	3	5	3	3	5
3.24.36 Personal-social problem solving techniques.	2	3	5	3	3	5
3.24.37 Criteria which can be used to evaluate proposed problem solutions.	1	3	6	2	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.38 Utilization of diagnostic and prescriptive techniques as a means for developing systematic plans for attacking individual, community, and school social problems.	2	3	5	2	3	4
3.24.39 Appreciation of research and problem solving techniques as important means for dealing with personal-social problems.	2	3	5	2	3	5
3.24.40 Communication behavior, both verbal and non-verbal.	2	3	5	2	3	4
3.24.41 Group dynamics and social interaction processes.	2	3	5	2	3	4
3.24.42 Processes and patterns for structuring groups toward more desirable patterns of social interaction.	2	3	6	2	3	4
3.24.43 Social climate and its effect on defining and achieving group goals.	2	3	6	3	3	5
3.24.44 Methods to aid individuals and groups to assess their progress toward achieving defined goals.		3	6		3	5
3.24.45 Sensitivity to and respect for the feelings of individual group members.	3	6	6	5	5	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.46 Desire to help group members to participate in ways which enable them to feel comfortable and secure.				5	5	5
3.24.47 Willingness to attend to the satisfaction of group members while working toward goals.				5	5	5
3.24.48 Different views of the nature of man, society, mind, knowledge, values, and the good life.	2	3	6	2	3	5
3.24.49 Different concepts of education which represent a consistent extension of particular views of the nature of man, society, mind, knowledge, etc.	2	3	6	2	3	5
3.24.50 Conditions needed to implement a particular operational design in a specific educational context, and the consequences of a particular design in a specific education context.		3	6		3	5
3.24.51 Procedures for determining and assessing different concepts of education as reflected in statements made by individuals and groups in the community.	2	4	6	2	3	5
3.24.52 Relationship between a philosophy of education and a philosophy of life.	2	4	6	3	3	5

Characteristic	Level of Development					
	Cognitive			Affective		
	Teaching Assistant	Teacher	Specialist	Teaching Assistant	Teacher	Specialist
3.24.53 Appreciation of different educational patterns or programs proposed by others who hold different views of man, society, knowledge, etc.				5	5	5
3.24.54 Continuing desire to examine and evaluate new patterns and programs of education.					5	5
3.24.55 Present and past educational concepts, principles, models, and theories, and their situational consequences.	1	3	6	2	3	3
3.24.56 Logical processes for analyzing different educational theories to construct theoretical models in concrete solutions.	2	3	6	2	3	5
3.24.57 Criteria that can be used to determine the strengths and weaknesses of various theories.	2	3	6	2	3	5
3.24.58 Willingness to alter one's own theoretical basis in the light of conflicting evidence.	2	3	6	2	3	5

SECTION II

PERSONALITY CHARACTERISTICS

3.25 Performance Specifications--Affective (Domain)

3.25.01 To develop and accept an accurate perception of self, in order to achieve a more adequate personality.

3.25.01.01 Ascertains the degree of acceptance one has among one's peer, academic, social, sex, and similar groups.

3.25.01.02 Assesses the limits of one's potential, in order to learn the extent of one's own capacities.

3.25.01.03 Examines one's tolerance for ambiguity, in order to discover the amount of regulation one requires in life and the environment.

3.25.01.04 Confronts the types of anxieties and types of fears one lives with in daily life, in order to achieve more effective behavior.

3.25.01.05 Determines the degree to which one is authentic in presenting one's personality and real self.

3.25.01.06 Assesses the degree of comfort and/or discomfort one finds in one's environment, in order to achieve satisfaction and stability.

3.25.01.07 Studies and examines the effects of the behavior of others upon oneself when choosing one's own behavior.

3.25.01.08 Understands and is able to use effectively the tools of communication.

3.25.01.09 Finds ways of dealing with conflict, in order that it does not incapacitate one's potential behavioral effectiveness.

3.25.01.10 Has the courage of one's convictions and presses them forward until change seems warranted.

3.25.01.11 Understands one's own personal behavioral characteristics when dealing with a crisis situation, in order to sustain competent behavior.

3.25.01.12 Develops a sense of empathy and oneness with one's fellow man, in order to work effectively with him.

3.25.01.13 Examines one's concept of existence, in order to derive personal meaning and direction in one's life and social behaviors.

3.25.01.14 Examines one's attitudes and beliefs regarding authority and societal institutions, in order to discern one's place in the social structure.

3.25.01.15 Becomes skilled in using feedback to assess self-behavior and amend it toward positive goals.

3.25.01.16 Learns that freedom is contingent upon the amount of responsibility one is willing to assume for one's own behavior.

3.25.01.17 Discovers that habits are not indelible, and that behavior can be changed toward any goals that are desired and sought after.

3.25.01.18 Realizes that hate is an element which can incapacitate effective behavior more quickly than almost any other negative element of human emotion.

3.25.01.19 Realizes that next to the emotion of hate, hostility, when carried to extremes, can be debilitating and leads to a lack of productive behavior.

3.25.01.20 Sees that happiness, essentially, is the key to all success and accomplishment.

3.25.01.21 Understands that all persons experience moments of identity stress when growing toward a more adequate personality: to not ask, "who and what am I," is indicative of a lack of growth and progress.

3.25.01.22 Learns that all people at one time or another have a feeling of inadequacy and that these can be utilized for promoting, as well as inhibiting, growth and the achievement of greater adequacy.

3.25.01.23 Seeks meaningful interpersonal relationships, in order that one might grow toward becoming a more complete human being.

3.25.01.24 Discovers that innovativeness and creativity are as much a matter of attitude and general outlook as they are innate potential.

3.25.01.25 Realizes that skill in making affective judgments can be learned and developed.

3.25.01.26 Learns that all people are in a search for personal meaning and that this search can lead toward great accomplishments or mediocre achievements; the choice is theirs.

3.25.01.27 Understands that love is an essential element and ingredient in all human relationships.

3.25.01.28 Discovers that problem solving and the utilization of critical thinking are keys in the development of dynamic leadership.

3.25.01.29 Acknowledges the role of reward and punishment as it relates to his motivations to achieve.

3.25.01.30 Discovers a sense of reality in one's life and environment, in order to develop an objective view of self.

3.25.01.31 Develops a sense of reassurance and confidence in oneself, in order to assume the responsibility for working toward one's personal goals.

3.25.01.32 Becomes aware that self-insight is usually acquired through openness with others rather than through a closed inspection of oneself.

3.25.01.33 Works toward an increased sensitivity and a greater awareness of the vast amount of communication present in all non-verbal behavior.

3.25.02. To acknowledge and accept one's social, psychological, and physical needs, in order to achieve a more adequate personality.

3.25.02.01 Understands one's need for acceptance in social relationships.

3.25.02.02 Learns to deal with aggressive behaviors in a social setting as well as on a psychological and physical level.

3.25.02.03 Learns to control one's particular needs, in order that they do not restrict the freedom of others by depriving them of their rights.

3.25.02.04 Examines one's need to be dependent upon others and the extent to which this dependence inhibits personal growth and achievement.

3.25.02.05 Acknowledges the important role that emotion plays in one's need structure.

3.25.02.06 Learns to deal with personal inadequacies as one works toward the accomplishment of satisfying one's needs.

3.25.02.07 Appreciates the interdependence of all human beings and works not only toward the satisfaction of one's own needs, but toward the satisfactions of others' needs as well.

3.25.02.08 Appreciates the role of human joy in attaining the fulfillment of personal needs.

3.25.02.09 Becomes aware that personal involvement is an essential element in satisfying social, psychological, and physical needs.

3.25.02.10 Appreciates the fact that mutual support is a solidifying factor in the achievement of social, psychological, and physical needs.

3.25.02.11 Realizes that the threat of failure is perhaps the greatest barrier to success in the satisfaction of personal needs.

3.25.02.12 Understands that social environment is flexible and can be changed rather easily to suit the needs of the inhabitants.

3.25.03 To acknowledge, accept, and deal with one's emotions, feelings, and intuitions, in order to achieve a more adequate personality.

3.25.03.01 Accepts oneself for what one is and who one is.

3.25.03.02 Develops techniques for overcoming feelings of alienation from the rest of one's peers and group mates.

3.25.03.03 Discovers that compassion as an emotion is most useful in guiding one toward appropriate behavior in unfamiliar situations.

3.25.03.04 Learns to utilize concern as the catalyst in achieving successful behaviors.

3.25.03.05 Becomes aware that high levels of conflict can inhibit appropriate behavior to the point of no behavior, while moderate conflict can motivate one to over achieve that which one might normally be expected to achieve.

3.25.03.06 Learns that the inability to deal effectively with feelings of defensiveness can rob one of many valuable experiences.

3.25.03.07 Discovers that feelings of dependency are normal, as well as abnormal, depending upon the degree to which one is dependent.

3.25.03.08 Understands that no one is immune from feelings of depression and inadequacies, but that these can be overcome through positive and successful experiences.

3.25.03.09 Understands that discouragement is an essential element of learning and that without failure, in some degree, little learning would take place.

3.25.03.10 Develops the ability to empathize with others, in order to continue personal growth and development.

3.25.03.11 Accepts the fact that feelings of hostility are normal, but must be monitored carefully, lest they destroy any sense of objectivity one might have in dealing with interpersonal relationships.

3.25.03.12 Comprehends the necessity of having love in everyone's life, in order to have a feeling of completeness and wholeness.

3.25.03.13 Discovers one's tolerance for rejection, which will aid one in setting goals and future levels of aspiration.

3.25.03.14 Acknowledges the fact that the emotion of sorrow is one that few people have a facility for handling with any degree of ease or comfort.

3.25.03.15 Understands that the feeling of support from others is comforting and highly encouraging.

3.25.03.16 Perceives that threat is the greatest inhibitor in the learning process.

3.25.04 To develop and enlarge one's capacity for human understanding and compassion for others, in order to achieve a more adequate personality.

3.25.04.01 Learns to become flexible in one's own behavior, in order to adjust to the needs of others.

3.25.04.02 Discovers ways and means for providing personal comfort for others in need of understanding and compassion.

3.25.04.03 Develops a personal commitment to others, in order to assist them as is necessary.

3.25.04.04 Becomes aware that compassion is a central element in developing human understanding.

3.25.04.05 Learns to have the courage to meet and accept people as they are and not as one would like them to be.

3.25.04.06 Discovers that failure can become a vicious circle in which one can get trapped, unless someone else is willing to show one the route to success.

3.25.05 To identify more fully and achieve toward one's aspirations and goals, in order to achieve a more adequate personality.

3.25.05.01 Becomes fully acceptant of one's personal talents and abilities as well as one's inabilities and deficiencies.

3.25.05.02 Discovers one's action potential for accomplishing goals and aspirations.

3.25.05.03 Confronts any feeling one might have which suggests that one will not reach a goal because of a lack of ability.

3.25.05.04 Finds the courage to strike out toward the attainment of one's goals, rather than developing a willingness to accept less than what is desired.

3.25.05.05 Develops a tolerance for failure and the resourcefulness to try again and again if one does not succeed on the first attempt to reach a goal.

3.25.05.06 Becomes alert to all feedback relevant to the achievement of one's goal, in order that one might modify one's behavior accordingly.

3.25.06 To awaken to and develop an awareness of the process of becoming, in order to achieve a more adequate personality.

3.25.06.01 Is ever alert to one's action potential, in order to accomplish all those things of which one is capable.

3.25.06.02 Sharpens one's consciousness and awareness to the world around one, in order that one is "tuned in" to what is going on.

3.25.06.03 Discovers the inner forces of one's personal motivation which guides one in the process of becoming.

3.25.06.04 Looks for opportunities to serve as a change agent in one's environment, in order to modify it toward purposeful ends.

3.25.06.05 Develops diagnostic skills in understanding individual and group behavior.

3.25.06.06 Achieves greater spheres of freedom, in order to have the flexibility to change as one "becomes."

3.25.06.07 Achieves a high degree of skill in handling interpersonal relationships for the mutual satisfaction of all concerned.

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PART FOUR

SPECIFICATIONS FOR EVALUATION

In this part of the report, the reader is presented with the specifications for evaluation. Evaluation involves the data obtained in the selection, training, follow-up, and cost effectiveness efforts. The procedures and rationale are first discussed, and, then, the specifications for evaluation are enumerated. The specifications for candidate selection, which are closely related to the specifications set forth in this part of the report, are contained in Part Two.

Procedure and Rationale

Systematic evaluation of a program consists of identifying a frame of reference for the school, establishing objectives to be achieved, defining behaviors to be accomplished, developing measures of those behaviors, and appraising student achievement. Evaluation, in addition to student evaluation, provides data for the systematic revision and improvement of the model. Operations analysis includes constant program evaluation, feedback, and adjustment of the model.

The frame of reference was identified by surveying the requirements that society places upon the school, by reviewing the literature to identify promising and innovating techniques and procedures, by exploring modern technology to determine possible contributions to the model, and by assessing the recommendations of the various learned societies as related to a model elementary school program. As a result of this search, goals for a model elementary school system were derived. (The goals are presented in Appendix B.) Goals are ultimate conditions which give the model both purpose and direction.

The objectives of the instructional program, by which the teacher guides the pupil in achieving, are logically derived from the defined goals. The objectives are immediately obtainable when full consideration is given to the nature of the learner and the instructional program. In establishing the objectives, concern was given to ascertaining whether or not the objectives were: (a) observable in pupil behaviors, (b) specifiable according to processes, (c) achievable in the program, (d) related to the content of program, and (e) appropriate at the level of instruction. (The objectives are presented in Appendix C.)

Each objective was subdivided into specific observable aspects termed behaviors. The behaviors were grouped into two categories: teacher and pupil. The teacher teaching behaviors are the tasks which the teacher performs in guiding the pupil. The pupil learning behaviors are the behaviors which the pupil performs. The pupils, logically, should achieve the objective by performing the learning behaviors.

Guides to Test Construction

In that the behaviors are specific and observable, they form a basis for writing the test items which are contained in the various evaluation measures. There are numerous methods used to outline a test or to prepare a test guide. An achievement test guide for a module in tests and measurement is outlined in Figure IV-1. In this approach the objective to be achieved is placed in the first column, and the supporting behaviors in the second. The processes of measurement are indicated in the next column where it will be noted that the category headings are those taken from the Taxonomy of Educational Objectives (Bloom, 1956). However, in an attitude or value scale, the category headings would be those of the affective domain (Krathwohl, 1964), and in a performance measure those of the skill domain. The number of test items is indicated in each cell and represents the amount of emphasis given to that topic and the process to be employed by the test item. Measures prepared in this manner are used in each module of the model program. The results of each mastery test are entered into computer memory for later analysis.

The Student Accomplishes the Following Objectives:	Supporting Content	Process used in Measurement					
		Recall	Comprehension	Application	Analysis/ Synthesis	Evaluation	Total No. of Items
Learns a brief historical background of educational measurement.	Work of Wundt, Galton, Cattell, and Binet. Measurement in four periods since 1900.	3					3
Acquires a brief overview of measurement.	Evaluation and measurement, observational techniques, functions measured, individual differences.	4					4
Develops an understanding of teacher-made tests.	Objectives, processes, content, item types, scoring, characteristics.	1	2	2			5
Writes test items.	Multiple choice, essay, true-false, matching.	1	1	1	1	1	5
Administers the test.	Directions, timing, key, reproduction of test, scoring.	1	1	1		2	5
Interprets the test.	Frequency distribution, mean, mode, median, histogram, standard deviation, correlation.		1	1	2	1	5
Prepares and presents normative data.	Descriptive statistics, percentiles, standard scores, profiles.	1	1	1	2	1	6
Acquires an understanding of desired test characteristics.	Reliability, objectivity, practicality, criterion, validity.		1	1	2	2	6
Gains experience in finding test information.	Sources, types of information, test evaluation procedures.		1	1		3	5
		11	8	8	7	10	44

Figure IV-1

Educational Test Module Guide

Evaluation of Performance

Initially, as a part of the admission procedure, an interest inventory, personality schedule, and biographical information blank are administered. However, during training the affective domain is appraised predominately in work experience sessions. As an integral part of the work experience, the student teachers are assigned standard tasks. The standard tasks, which are assigned in the work sessions during the beginning phase are paraprofessional tasks. Examples of paraprofessional standard tasks are presented in Figure IV-2.

1. Assists pupils in preparing bulletin board.
2. Oversees pupils engaged in games familiar to them.
3. Prepares training aids for classroom usage.
4. Observes pupils with an observation schedule and reports results.
5. Tells a story to a group of pupils for recreation purposes.
6. Checks pupils' work assignments.
7. Catalogues and files series of training materials.
8. Helps pupils locate learning resources.
9. Oversees pupils in their trip to lunch, during lunch, and return from lunch.
10. Makes the height and weight measures of pupils and records them.
11. Collects lunch money from pupils and records payments.

Figure IV-2

Examples of Standard Tasks
Assigned during Initial Work Sessions

The standard tasks are appraised by whatever techniques are deemed appropriate. For certain tasks such as preparing a training aid, there are end products to evaluate. Other tasks follow routing procedures and can be evaluated by a check list, such as the tasks of cataloguing and filing materials. Some task performance can be checked for accuracy, for example, measuring height and weight, and scoring routine pupil work assignments. Finally, other tasks require ratings. An example of a possible rating scale for guiding pupils in preparing a bulletin board is given in Figure IV-3.

The apprentice teacher's performance in the skill area is measured primarily in laboratory sessions. The outlines for skill measures are similar to those of the cognitive and affective domains. The objectives and supporting behaviors are indicated; however, the processes are those of the performance domain. The processes in the model program have arbitrarily been defined as involving learning to perform a specific art, organizing acts into sequence, establishing sequences into procedures, and selecting procedures to achieve objectives of a given system.

After all proficiency module measures have been administered for a given block of the program, the progress of the apprentice teacher is reviewed by the student's advisor. The advisor critiques the student's progress with him after each phase. The progress is appraised based upon the results of the mastery task, performance tests, and standard tasks. The advisor, normally, advances the student teacher into the next phase. However, in the event of unsatisfactory progress, the student can be advised to enter teaching in a paraprofessional category or transfer to another program. If the student requires time to remove a deficiency, the paraprofessional route is recommended. If the student lacks qualities to become a professional teacher, a transfer is recommended. Progress reviews and possible routes are depicted in Figure IV-4. In reading Figure IV-4, it should be noted that the final block represents a period of follow-up evaluation designed not only to determine the extent to which the student was successful as a teacher, but also to evaluate the instructional program itself.

The apprentice teacher is assigned the task of having the pupils prepare a classroom bulletin board.

A. Teacher provides guidelines.
B. Apprentice teacher and pupils prepare board.
C. Teacher rates apprentice teacher in the task.

Performance Rating Scale

1	2	3	4	5
Apprentice teacher prepares board with available materials.	Apprentice teacher directs pupils in preparing board.	Pupils prepare board with materials suggested by apprentice teacher.	Pupils prepare board with materials of their selection.	Pupils are stimulated to design imaginative and functional board.

Figure IV-3

Example of Standard Task Rating Scale

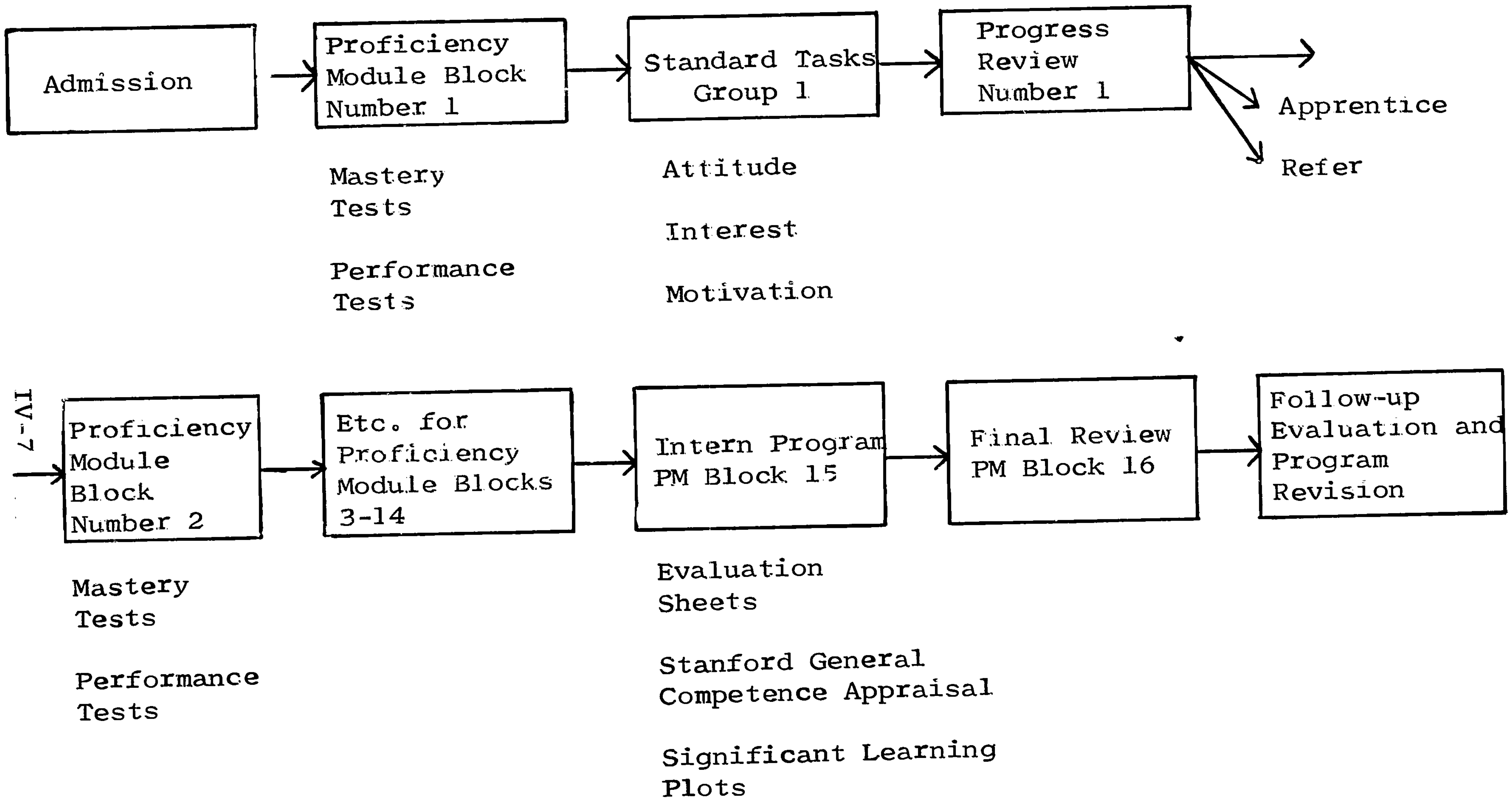
Admission
Proficiency Module Block Number 1
Mastery Tests
Performance Tests
Standard Tasks Group 1
Attitude
Interest
Motivation
Progress Review Number 1
Apprentice
Refer
Proficiency Module Block Number 2
Mastery Tests
Performance Tests
Etc. for Proficiency Module Blocks 3-14
Intern Program PM Block 15
Evaluation Sheets
Stanford General Competence Appraisal
Significant Learning Plots
Final Review PM Block 16
Follow-up Evaluation and Program Revision

Figure IV-4

Apprentice Teacher Progress Review

In other words, the evaluative procedures and devices described in this report will be used to collect data which will reveal strengths and weaknesses in the program, so that continuous improvement of the model program becomes a continuing feature.

One example of a standard task, which would provide evaluative data not available through conventional means, could be having an apprentice teacher accompany a social worker, public health nurse, or other professional person in visiting homes of people with varying backgrounds of culture, ethnic origin, physical and mental being, or socioeconomic status, and requiring the student to prepare a report of observed conditions bearing implications for the teacher and the school. Another might be having an apprentice teacher, who has completed a series of PMs in child development and educational psychology, paired with a pupil having difficulties with one or more aspects of learning. The student, under the supervision of an appropriate professional worker, would be observed as he guides the pupil's learning behavior and demonstrates his mastery of the teaching behaviors designed to remove the deficiencies. Figure IV-5 provides a list of some sample standard tasks suitable for students completing the first half of the professional program (PM Block 11).

One of the principle approaches used during the internship program is the microteaching technique developed by the School of Education at Stanford University (STEP, 1968). The technique involves clearly defined teaching skills in presentation, stimulus situation, reinforcement, questioning, and closure. The apprentice teacher is presented with the techniques, applies them in small groups, is provided immediate feedback by means of video-tape, and is evaluated in performance by contemporaries and supervisors.

In the microteaching procedure, the student and supervisor play back the video-tape recording immediately after the student's presentation. As a conclusion to the playback, in this model, the supervisor indicates to the student teacher the opportunities for significant learning which the student did and did not treat adequately. The significant learning opportunities are those occasions

1. Interviews the pupil to gather information requested in a biographical information blank.

2. Administers a standardized test to define the pupil's achievement in:

    A. Word knowledge
    B. Reading ability
    C. Arithmetic skills
    D. Language skills
    E. Study skills

3. Analyzes results and defines problem.

4. Prescribes pupil learning behaviors.

5. Guides pupil in mastery of behaviors.

6. Prepares mastery test for problem area.

7. Administers mastery test.

8. Evaluates results.

Figure IV-5

Samples of Standard Tasks
for the Completion of the First Half
of the Professional Program

in which an inquiry is made into a behavior related to achieving an objective. The occurrence of such a significant learning opportunity is later independently verified by a second supervisor.

A plot of these significant learnings is prepared for each student. A hypothetical plot is presented in Figure IV-6. The abscissa represents teaching sessions (trials), and the ordinate depicts the number of opportunities for significant learning which the student teacher did and did not deal with adequately. There are three items of special interest in the plots. The student, with practice, should eliminate untreated significant learning situations prior to graduation. The slope of line (1), computed by least squares method, indicates the rate at which the student is learning to deal with the situations. The level (ordinate value) of line (2) depicts the performance plateau for the student. These data are collected as possible predictors of success in a teaching position.

Other Criterion Measures

In reviewing the literature, it was found that certain factors were regarded as highly important in providing an effective school system. These were the early childhood educational program, the teachers' personal characteristics, parental attitudes, and the evaluation procedures employed. Thus, in developing the model program, an evaluation subsystem was so structured as to include as criterion measures pupil achievement ratings, parental attitude scales, peer rating scales, supervisory ratings, and video-tape recordings of teacher performance for evaluative purposes.

The achievement of the pupils includes such conventional measures as elementary school achievement batteries. The parental attitude scale measures the parents' attitude toward the goals of the system. The peer ratings are an appraisal of what the teacher's contemporaries think of her effectiveness as a teacher. The supervisory ratings deal with the teacher's effectiveness and proficiency in performing assigned tasks. The video-tape of teacher performance is recorded and scored in a fashion similar to that in the aforementioned microteaching technique.

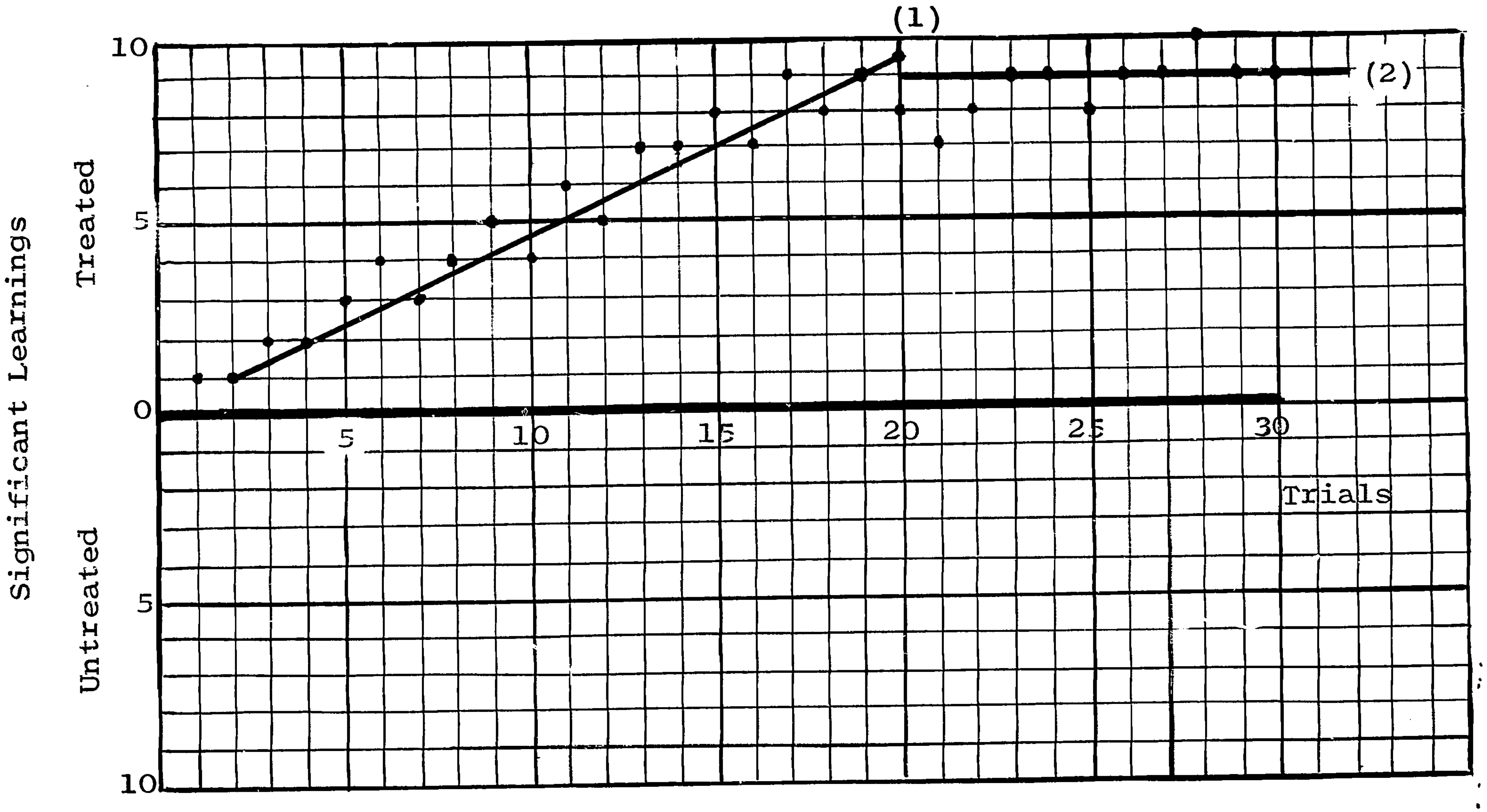

Figure IV-6

Hypothetical Plot of Significant Learnings by Trials

Data Processing

The data obtained by administering the various measures in the selection, training, and criterion programs are analyzed to determine if the objectives are achieved and to define the effectiveness of the various subsystems. The analysis includes such statistics as normative data, item analysis, reliability, analysis of variance, correlational analysis, factor analysis, cost effectiveness, and validity.

Data processing requirements are considered prior to implementation. One of the major requirements is that the data be numerical or coded in numerical form. Another consideration involves the routine of substituting scanner sheets for traditional answer sheets in all measures: (a) selection, (b) training, and (c) criterion. The student responses on scanner sheets are automatically punched on cards. For example, the IBM 1232 Optical Reader transcribes at the rate of 1,000 cards per hour.

After the information is on a card deck, it is transferred to tape storage with the use of a reader such as the IBM 1052. In the model program, a remote 1052 in the College of Education calls a program from the data cell of the IBM 360 computer. The data processed by the combination provides such information as:

1. Item difficulty.

2. Internal consistency.

3. Means.

4. Standard deviation.

5. Realiability.

This information is made available either on a televiewer or on microfische.

The information placed in tape storage is available whenever a set of data becomes complete. An appropriate analysis of the complete data is run, utilizing programs such as the Biomedical Computer Programs, e.g., BMDO6M, (Dickson, 1965). A complete library of BMD's is available for such operations as multiveriate analysis, regressional analysis, canonical correlations, and the like. A statistical analysis of this type indicates the weight to be given to each functional selection, training, and criterion measure.

Cost Effectiveness

In the search of educational and technological resources, the availability of materials, aids, methods, and techniques appears to be endless. The funds available for education are limited. The task is to select the resources which serve our purposes best, based on a cost effectiveness criterion. The method employed is an adaptation of the Abt Associates Model (Abt, 1967). The cost is normally fixed by the school budget. The effectiveness is much more difficult to measure precisely. Certain student information regarding effectiveness is readily available, for example: attendance, achievement, and dropouts. Other information is unavailable or difficult to obtain, for example: equality of educational opportunity, change in attitude, and adjustment to changing conditions. The effectiveness of a model varies with the community setting and personnel. Thus, the results of a cost effectiveness analysis might differ with implementors.

In the Georgia Educational Model there are two major subsystems to consider in cost effectiveness. They are the teacher education program and the elementary school program. The specifications are for the student who is to become the teacher; however, the teacher, in turn, is measured by the improvement in achievement of the elementary pupil. Thus, the cost effectiveness study includes the entire system.

In a cost effectiveness model there are three items of interest: inputs, outputs, and their relationship. The inputs are those items for which money is spent. The outputs are the benefits which are received from the expenditures. The relationship predicts how the output will change for a given input change. Unfortunately, the difficult tasks of measuring effectiveness and defining relationship combine to render predictions which, at their best, are only estimates.

One of the most desirable outputs is an increase in achievement. This increase is measured by conventional achievement batteries, performance tests, and scales. The increase in achievement is equally appropriate as an effectiveness measure for both the student in the college program and the pupil in the elementary school. The increase in achievement covers the entire range of content: knowledge, performance, and attitudes.

The effectiveness measure for equality of educational opportunity can be estimated from a lack of statistical significant correlation between the socioeconomic level as obtained in the biographical information blank and achievement in content. The measure is equally appropriate for the apprentice teachers and the pupils.

A measure of productivity can be estimated initially from the starting salaries offered to the student teacher at graduation. During the follow-up, inquiry is made into the increase in salary of the teacher. Productivity is probably not an appropriate measure for the pupil, unless the elementary school is the terminal educational institution for him.

The school variables are appropriate measures of effectiveness for the student teacher and the pupil. Extensive school records have been maintained for such items as attendance, attrition, graduation, and continuing higher education. Measures of these items for the student teaching program are appropriate to use in appraising the effectiveness of the selection and training procedures for the apprentice teacher. Again, the same statistics computed for the elementary school is one measure of the improvement wrought by the educational model program.

The increase in utilization of facilities and equipment, if accompanied by an increment of achievement, reduction in learning time, or the like is an indication of usefulness of the item in the program. The utilization is an indication for both the teacher education and elementary school programs.

After the inputs and outputs are measured, the alleged relationship existing between them is estimated. The estimations are achieved in various ways, and usually by whatever means is possible. In certain cases, an item is added to the program and an increment of achievement is hopefully realized. In this case, the experiment is controlled so that the item is the cause for the change and the increment of achievement is the result. Another estimate of relationship between inputs and outputs involves factor analysis. The principle components are identified and the weighting of certain measures on those components are computed. If the program measures happen to be also effectiveness measures, a comparison of their relative effectiveness is obtained from the weights. When the effectiveness data is analyzed, other estimates might be feasible. As a final consideration, professional judgment is necessary for making decisions in situations lacking complete information or procedures for thorough analysis. As the content of the cost effectiveness analysis shifts from the more routine and exact, such as supplies, to the complex and intangible such as changing of attitude, the role of professional judgment based on available information becomes increasingly critical in selecting the inputs to finance for desired outputs.

SPECIFICATIONS FOR EVALUATION

4.00 Specifications for Evaluation

Note: Specifications for evaluation includes measures and processes for selection, achievement internship, criterion, and cost effectiveness.

4.00.01 Professional standards are maintained in test construction administration analysis, and in the interpretation of the evaluation program.

4.00.02 All data are entered in computer storage for processing.

4.00.03 Specifications for measures in evaluation program to be analyzed.

Selection Measures
Qualitative ability
Quantitative ability
Interest
Personality
Biographical information
High school achievement

Performance Measures
Achievement by process categories (all PMs)
Performance in laboratory (all PMs)
Standard tasks

Phase I Preprofessional Program
Phase II Professional Program
Phase III Specialist Program

Intern Measures
Evaluation sheets (all PMs)
Stanford Teacher Competency Appraisal Guide
Plot of Significant Learnings

Criterion Measures
Pupil achievement
Parental attitude scale
Peer ratings
Supervisory ratings
Video-tape of teacher performance

4.01 The selection data include all measures collected for candidate selection (see Specifications 2.00).

4.02 The teacher performance data include all scores of the PM measures listed in specifications for teacher performance 3.00.

4.02.01 The achievement test guide for each PM designates: objectives, support content, and cognitive process (see Figure IV-1).

4.02.02 The performance test guide for the skill domain designates: objective behaviors and skill level.

4.02.03 The affective measures guide for affective domain designates: objectives, attitudes, values or motives, and affective processes.

4.02.04 The standard tasks are administered during student work experiences and appraised, and results entered into computer storage (see Figure IV-4).

4.02.05 The student progress is reviewed with the student at the conclusion of each phase (see Specification 4.00.03).

4.03 The internship data include all student teacher scores of the measures administered during the intern PM block.

4.03.01 The measures completed during the intern PM block include Microteaching Evaluation Sheets for: reinforcement skill, variation of stimulus situation, pre-instructional procedures, lecture, and use of audio-visual aids, illustrating and use of examples, closure, and student-initiated questions.

4.03.02 The mastery measures of the intern achievement include: Stanford Teacher Competence Appraisal Guide, Plot of Significant Learnings.

4.04 The criterion data include all student scores of measures administered after completion of the teacher education program.

4.04.01 The achievement of the teacher's pupils in the elementary model includes: vocabulary, spelling, reading comprehension, arithmetic skills, study skills, social studies, and science.

4.04.02 The parental attitude scale measures the attitude of the parent toward the school system and the child's progress.

4.04.03 The peer rating appraises the competence of the teacher as judged by co-workers.

4.04.04 The supervisory ratings appraise how well the teacher is accomplishing his assignment.

4.04.05 The video-tape of the teacher's performance covers a significant presentation and is appraised as described in the specifications for the internship (4.03).

4.05 Cost effectiveness data and procedures include the inputs to the school program, outputs, and the relationship between the inputs and outputs.

4.05.01 Specifications for inputs to the cost effectiveness model (illustrative).

Instructions
- Staff category
- Student/teacher ratio
- Mode of presentation
- Exposure of time

Training Equipment
- Audio-visual
- Charts--mock-ups
- Programmed instruction
- Video-tape and recorders
- Computer-assisted instruction
- Television

School Plant
- Laboratory equipment
- Work shops
- Library

Instructional Materials
- Modules
- Field trips
- Curriculum materials

General
- Health services
- Food services
- Transportation

4.05.02 Specifications for outputs of cost effectiveness model (illustrative).

Pupil Achievement
- Reading comprehension
- Language usage
- Arithmetic reasoning
- Work study skills
- Vocabulary
- Science
- Social science

Teacher Capability (Improvement)
- Knowledge
- Performance
- Attitude
- Productivity

Community Assets
- Equality of educational opportunity
- Knowledgeable and productive citizen
- Increased life-long earnings

School (Improvement)
- Percent graduated
- Attendance
- Utilization of facilities and equipment
- Increase in efficiency

4.05.03 The relationship between input and outputs is estimated and expenditures allocated.

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PART FIVE

SPECIFICATIONS FOR CONDITIONS ESSENTIAL TO IMPLEMENTATION

This part of the final report is concerned with the presentation of specifications for conditions essential to the implementation of the model program. The specifications presented thus far have described the kinds of candidates who are regarded as admissable to the program, have provided the specification for teacher performances expected of students at each of various defined points along the total program continuum, and have presented the specifications for a longitudinal follow-up evaluation of both teacher performances and the model teacher educational program.

Useful as the above mentioned specifications are for developing a preservice and inservice program for the preparation of elementary teachers, they would be incomplete for the accomplishment of the task without detailed concern for such matters as instructional program sequence, methods of content selection and presentation, organization and administration of the program, utilization of staff and facilities, extensiveness of laboratory facilities, the orientation program, and the inservice training of college personnel to carry out the model program. These are the concerns of this part of the report.

Rationale and Procedure

General reference was made in Part One of this report to the fact that in the preliminary stages of its work GEM surveyed professional literature on teacher education, visited existing model programs, and consulted with specialists in the field. As part of this investigation, GEM also took into account existing conditions in the education of prospective elementary teachers in the colleges and universities of the United States today.

On the basis of the initial survey and a consideration of program development techniques and evaluation procedures, GEM established certain principles which the staff used as criteria in establishing the specifications for conditions essential to the implementation of the model program. Among these principles are the following:

1. The model program should be systematically planned in terms of goals and objectives, and all objectives should be so stated that they may be reduced to behavioral terms.

2. The primary criteria for the selection of the content for the program should be its importance toward helping the learner perform more effectively as a member of society and as a teacher.

3. The content for the instructional program should be organized in accordance with what is known regarding how the content is most effectively learned.

4. Content should be so selected as to give appropriate relative emphasis to all objectives including those related to the subject matter, thought processes, skills, and attitudes regarded as essential for effective performance of the teacher, both as an intelligent member of society and as a professional worker.

5. Content should be selected by teams of specialists who have studied the performance behaviors required of teachers and should use these behaviors to provide an adequately balanced instructional program.

6. The method of instruction for the teaching of any selected element of content should be that method which considers the individual student, and is regarded as the most effective method for producing the desired effect.

7. Instruction should be controlled by an achievement or mastery variable (rather than a time variable). That is, students should be encouraged to pursue a task until such time as they demonstrate mastery of the level of performance required of them.

8. Systematic provision should be made for teacher-student and student-student interaction when the acquisition of particular knowledges, thought processes, skills, or attitudes is effectively achieved through these learning conditions.

9. The extent to which emphasis in instruction should be given to subtopics presented as part of broader areas of learning should be determined by interdisciplinary groups who are cognizant of the performance behaviors to be acquired.

10. Time devoted to laboratory experiences should be as extensive as is needed for the student to acquire the knowledge, processes, skills, and attitudes required by the objectives.

11. The extent to which a student has satisfied the prerequisites for undertaking new learnings should be systematically determined before the new learnings are undertaken.

12. Content should be organized in such a manner that practical applications and basic theoretical concepts are introduced concurrently, with stress being given to their interrelationships. More complex theoretical considerations should be undertaken only after the basic practice and theory have been assimilated.

13. As a student pursues an area of learning, the instructor should give continuous attention to the student's aptitude, accumulation of knowledge, skills, and attitudes and find means of best utilizing these characteristics to enhance learning.

14. The materials and equipment for instruction should be those which provide for the most effective attainment of the objectives. (They should not be limited

to any one set or kind of materials or equipment such as books, films, computers, programmed materials, teaching machines, or television tapes.)

15. Learning laboratory tasks should be designed to guide the student not only in demonstrating principles and learning skills in the use of equipment, but should also be designed to guide the student in acquiring the psychological skills of higher thought processes such as problem solving.

16. Students enrolled in elementary education curricula should be generally prepared in all subject areas commonly taught in the elementary schools, but should also have a subject area of competency in which they demonstrate a higher level of performance than they do in the others.

17. Evaluation should be directed toward determining the extent to which the student has attained the characteristics reflected by the objectives. If the objectives are collectively concerned with cognitive elements and processes, skills, and attitudes, then the evaluation should be equally concerned with these collective facets of learning.

18. The method of evaluation should be that method which most effectively determines the extent of achievement of the student in relation to the objectives. Normally, a variety of evaluation instruments are required for an efficient evaluation program.

19. Sampling procedures for test items should be balanced in relation to the extent of emphasis given to the various objectives of instruction.

20. A program of evaluation for an instructional program should systematically provide for a follow-up evaluation of the student on-the-job, so as to obtain data with regard to the overall effectiveness of the instructional program for its eventual improvement.

21. The model instructional program should be the basis for determining the administrative organization which will implement that program.

22. The academic time schedule should be so arranged that whenever a student is ready to begin a new area of learning, he is permitted to do so.

23. The determination of the professional status of a student should be based on the results of an evaluation of his on-the-job performance and the related knowledges, thought processes, skills, and attitudes which he demonstrates.

24. Allowance should be made in the time schedule and course load requirements of the program for individual differences among qualified students in their potential, rates of learning, health and physical stamina, financial conditions, and other such variables.

25. When a student begins a curriculum sequence, he should ultimately anticipate reaching the highest level of professional achievement of which he is capable.

26. Persons who have achieved professorial status for their high level of academic or professional competency should not dissipate these special qualities by being required to perform managerial functions. Non-professionals with managerial skills should be employed to facilitate functions of the professionals.

27. All students should be provided equal opportunity to receive uniform high quality instruction.

The Proficiency Module

Confronted with the above list of criteria, the GEM staff set about to design a program for implementation which would, to a large extent, reflect the ideals it sought to fulfill. The result of this seeking is contained in the specifications for implementation which follow. However, to avoid confusion in reading the specifications, the reader must have some initial notion of the vehicle which the staff created and which made possible the described system of instruction. It is called a proficiency module, and without a general introduction to this vehicle, certain of the specifications for implementation might seem meaningless.

A proficiency module (PM) is defined as a published guide which is designed to direct individual student learning behavior in studying particular subjects or topics or in undertaking particular activities in laboratory situations. PMs are not correspondence courses; they are not programmed instruction guides; they are not void of provision for humanistic qualities; and they are neither workbooks nor textbooks. They are a means of organizing modules of content for instruction in such a manner that it is assured that the student either has acquired the content of that module, or that he will do so by carrying out the instructions contained in it.

The content for any PM is a selected cluster of related teacher performance behaviors (see Specifications 3.00) including not only definitions, facts, and concepts, but also thought processes, motor skills, and attitudes. The core of the PM, insofar as the student is concerned, is a series of learning tasks prepared by specialists. These tasks are carefully designed and arranged in such a manner that they are regarded as the most effective known means of guiding students toward the acquisition of the performance behaviors. These tasks provide multiple sequences for the attainment of the desired end in such a manner as to make them adaptable to individual differences among students in such characteristics as rate of learning, sensory sensitivity, and cognitive styles.

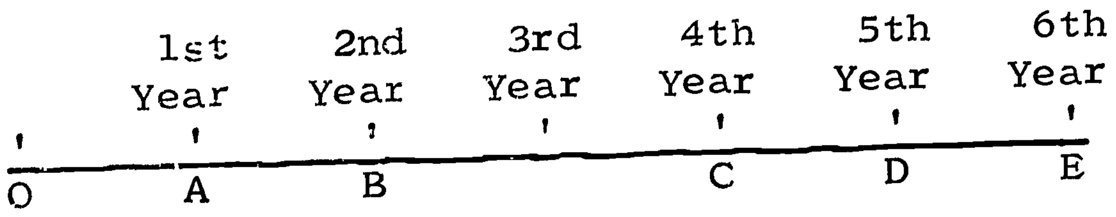
When properly constructed, PMs avoid duplication of content among offerings and permit the student to move through the program at a pace which is both comfortable and challenging to him. A qualified student may move as rapidly as he is capable of moving or as slowly as is necessary for him to move in meeting the specific requirements. However, unless PMs are constructed in accordance with the specifications contained in this report, they may become a weak substitute for the still weaker, current system of education which permeates traditional programs of teacher education today.

SPECIFICATIONS FOR CONDITIONS ESSENTIAL TO IMPLEMENTATION

5.01 Program Sequence Specifications

5.01.01 The total model program (both the preservice and inservice) provide for four levels of professional competency. Estimated time for the average qualified student to complete the total program is six years.

5.01.02 Diagram of specifications for estimated time sequence to complete phases of the total program.



Event

O Starting point.

A Competency for paraprofessional service as a *teacher's aide*. (Persons accepted for admission must be qualified and declare intention of moving beyond phase A in the direction of phase E.)

B Competency for paraprofessional service as a *teaching assistant*. Requirements for associate's degree completed.

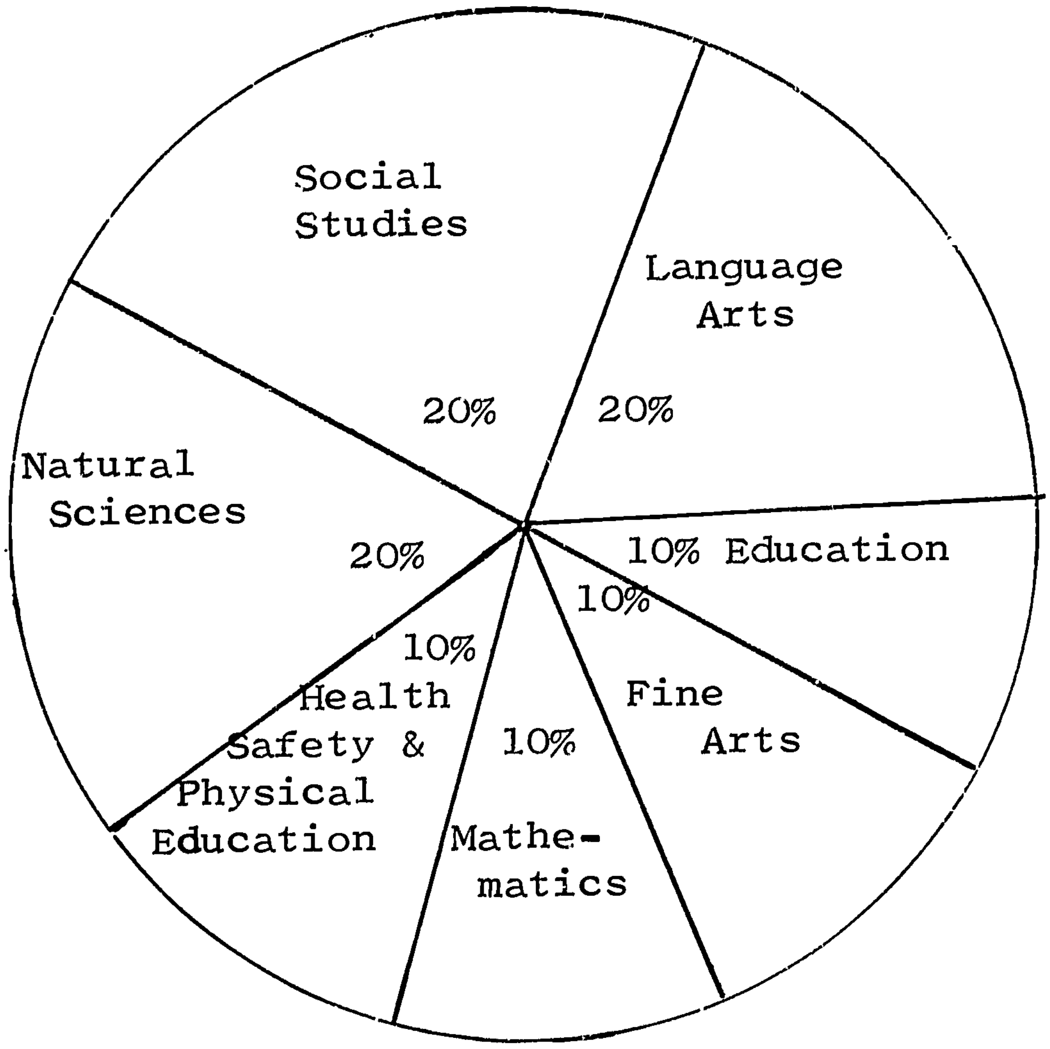
C Competency for professional service as a *general elementary teacher*. Requirements for bachelor's degree completed. Prerequisites for admission to specialist's program satisfied.

D Requirements for *master's degree* completed.

E Completion of subject specialization. Requirements for *specialist's degree*.

5.01.03 Completion of the preprofessional program provides the student with competency for paraprofessional service as a teaching assistant in the elementary school, the associate's degree, and the basic prerequisites for admission to the professional program.

5.01.04 Diagram of specifications for distribution of emphasis among subject areas for students in the preprofessional program.



5.01.05 Of the total subject requirements, 90% of the emphasis of the average student is given to general education requirements and 10% is given to professional education requirements.

5.01.06 General education requirements are distributed among those subject areas basic to an elementary school curriculum.

5.01.07 The study of professional education is initiated in the preprofessional program.

5.01.08 The preprofessional program provides a continuous sequence of study and practical laboratory experience through the media of proficiency modules (see specifications for PMs 5.02).

5.01.09 Diagram of specifications for study sequence for the preprofessional program (see Specification 5.05.05 for explanation of seminars).

Language Arts	Lab. Exp. Pre-prof. Estm. 6 wks	Language Arts
Social Science		Social Science
Natural Sciences		Natural Sciences
Music		Art
Health Education		Health Education
Para- and Professional Education and Advisor-Advisee Seminars		

Months 0 1 2 3 4 5 6 7 8 9

Language Arts	Lab. Exp. Pre-prof. Estm. 6 wks	Language Arts
Social Science		Social Science
Natural Sciences		Natural Sciences
Mathematics		Mathematics
Health Education		Health Education
Para- and Professional Education and Advisor-Advisee Seminars		

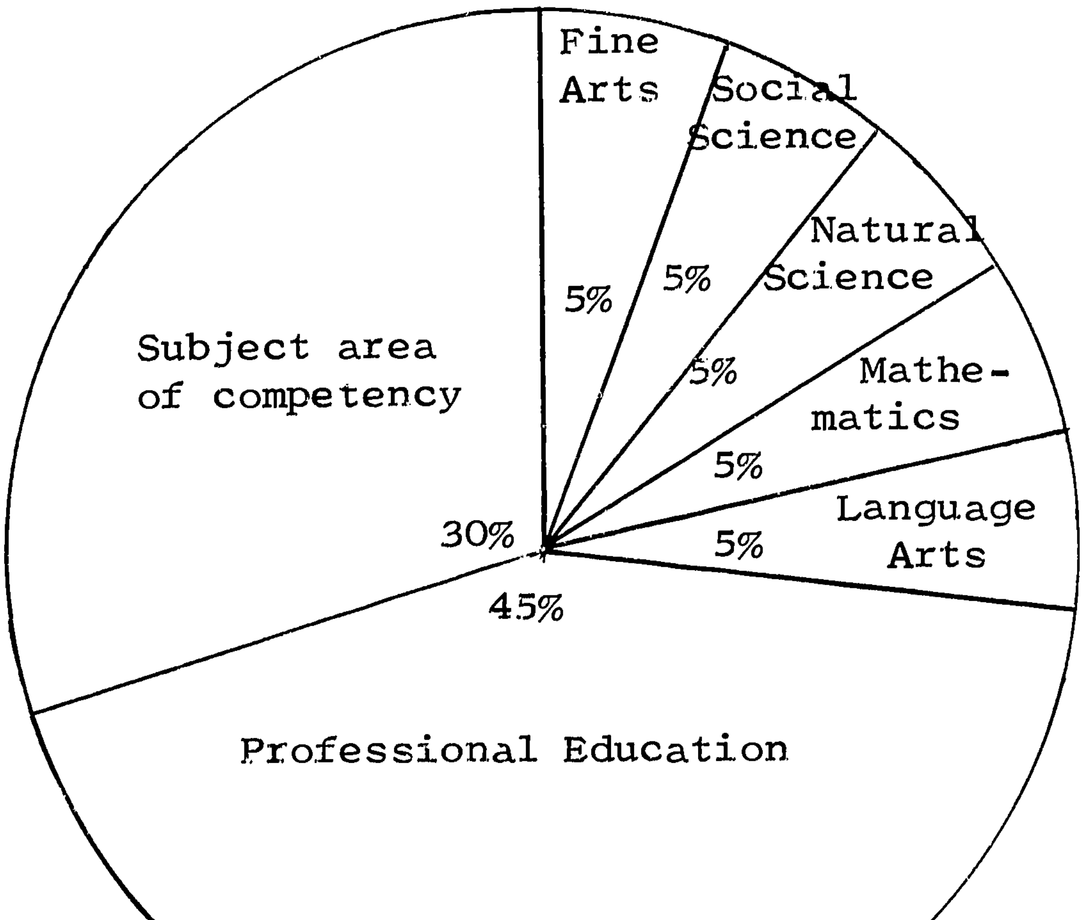
10 11 12 13 14 15 16 17 18

5.01.10 Time for the average qualified student to complete the preprofessional program is 2 academic years or approximately 18 months.

5.01.11 Two practical laboratory experiences are required during the preprofessional program; one during each half (see Specifications 5.04).

5.01.12 The professional program provides the student with competency for professional service as a general elementary teacher, the bachelor's degree, and subject prerequisites for admission to the specialist program.

5.01.13 Diagram of specifications for distribution of emphasis among subject areas for students in professional program.



5.01.14 Of the total subject requirements, 25% of the emphasis of the average student is given to general education requirements, 30% to an area of competency, and 45% to professional education.

5.01.15 Teaching areas of competency in the professional program are:

Language arts (including reading)
Social sciences
Natural sciences
Mathematics
Health education
Music
Art
Foreign language
Human development

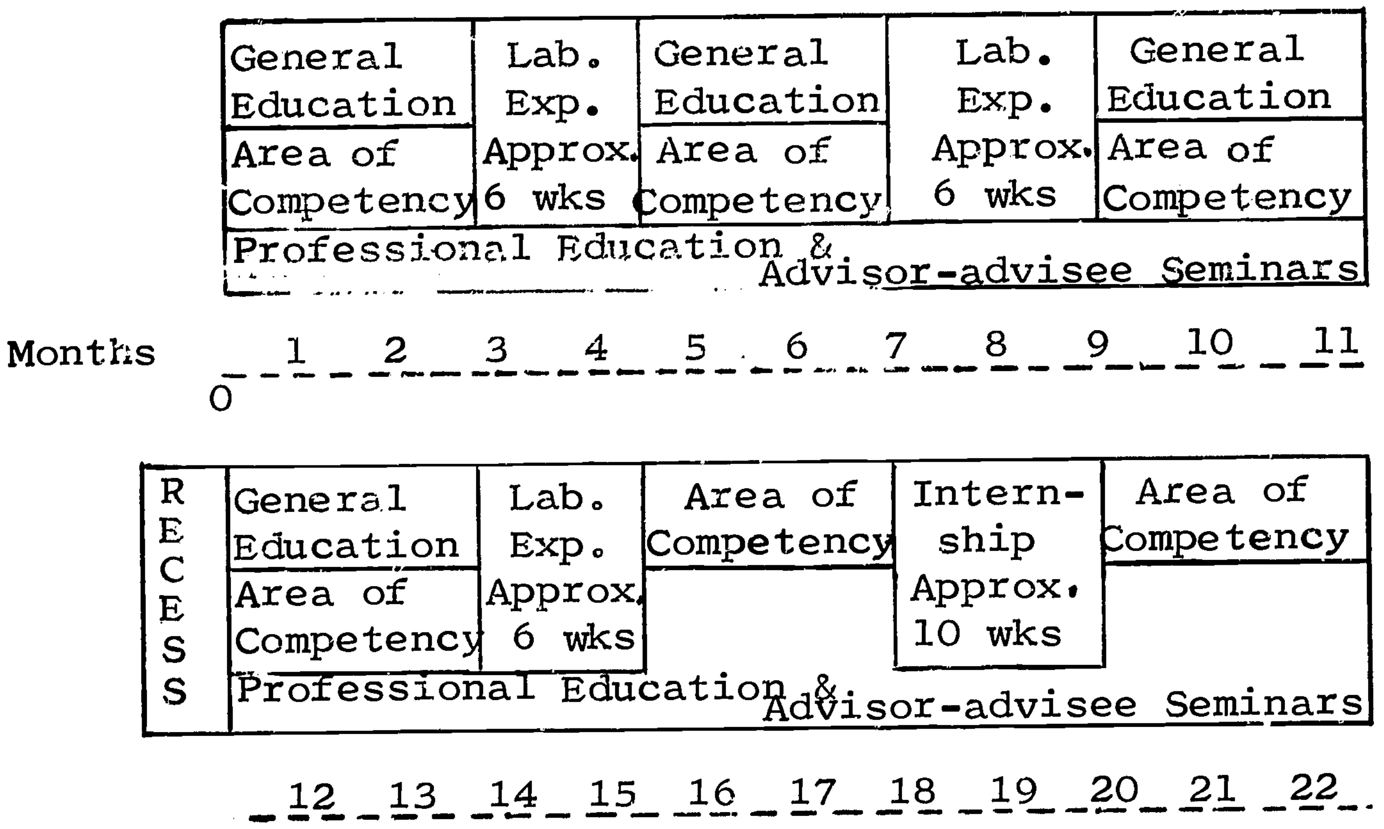
5.01.16 The professional program provides a continuous sequence of study and practical laboratory experiences through the media of proficiency modules (see Specifications for PMs 5.02).

5.01.17 The time for the average qualified student to complete the program is 2 calendar years or approximately 22 months.

5.01.18 There are 10 blocks of PM requirements in the professional program. Each block contains a variety of PM requirements and each block must be completed in sequence. (see Specifications 5.02).

5.01.19 Three 3-week practical laboratory experiences are required during the professional program. They occur during blocks 2, 4, and 7. An internship of approximately 10 weeks is required during block 9 (see Specification 5.01.20, also 5.04).

5.01.20 Diagram of specifications for study sequence for professional program.


General Education
Lab. Exp.
General Education
Lab. Exp.
General Education
Area of Competency
Approx. 6 wks
Area of Competency
Approx. 6 wks
Area of Competency
Professional Education & Advisor-advisee Seminars
Months
0
1
2
3
4
5
6
7
8
9
10
11
RECESS
General Education
Lab. Exp.
Area of Competency
Internship
Area of Competency
Area of Competency
Approx. 6 wks
Approx. 10 wks
Professional Education & Advisor-advisee Seminars
12
13
14
15
16
17
18
19
20
21
22

Note: The area of the blocks indicates the approximate distribution of effort (in percentages) required by the average student to complete the PM subject groupings indicated.

5.01.21 The specialist or inservice program leading to the specialist level of competence provides the teacher with continuous learning and professional development.

5.01.22 There are 15 areas of specialization provided in the specialist program. Job descriptions of each are provided in Appendix A, and specifications for performance are classified in Part Three of this report. The 15 areas are:

Language arts
Social sci.
Natural sci.
Mathematics
Health educ.
Art
Music
Foreign lang.
Human development & learn.
Professional development
Evaluation
Instructional media
Pupil personnel
Curriculum & program planning
School-community relations

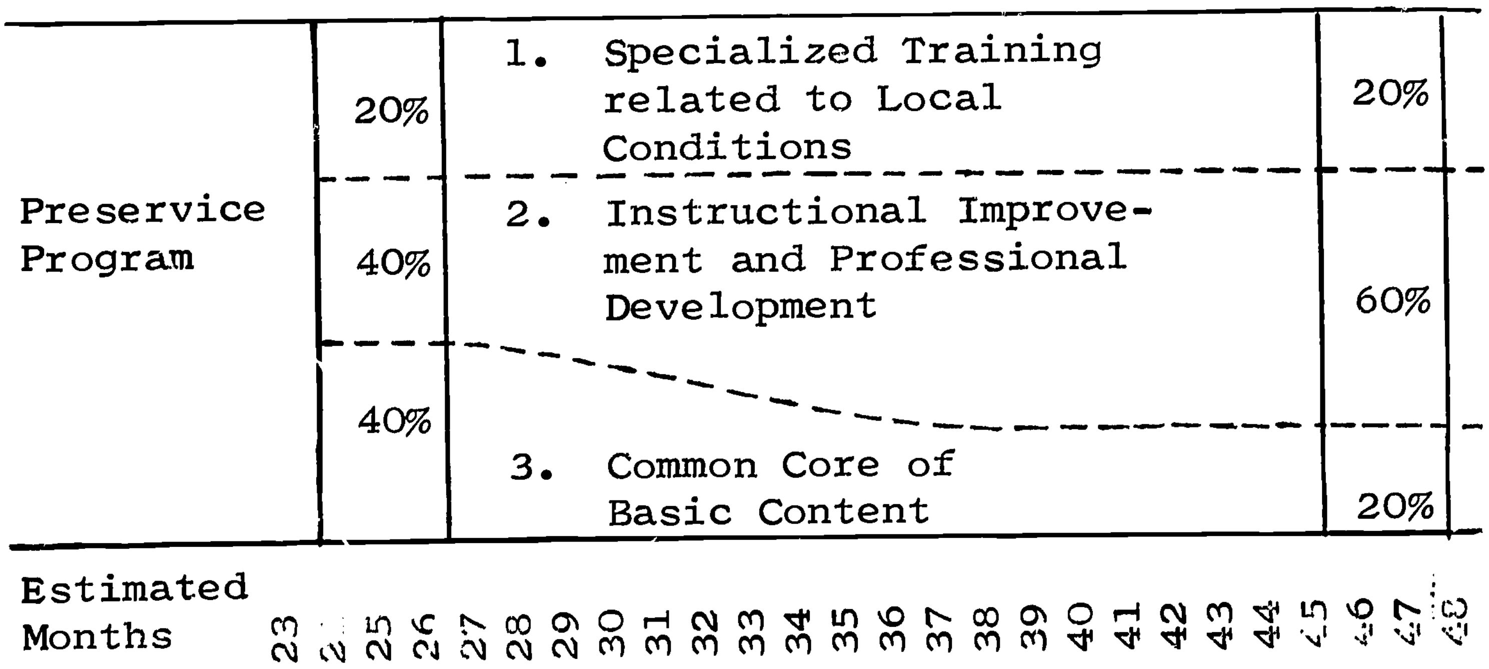
5.01.23 The specialist's program is organized into three areas (see Specifications 5.01.24, 5.01.25, and 5.01.26).

5.01.24 Training related to local conditions prepares the specialist teacher for optimum effectiveness in adapting to or modifying unique local conditions. (Those local conditions include school organization, socioeconomic level, and special instructional patterns.) This training is the responsibility of the local school district in cooperation with the advisor and the university specialists (see specifications for administration and organization 5.03).

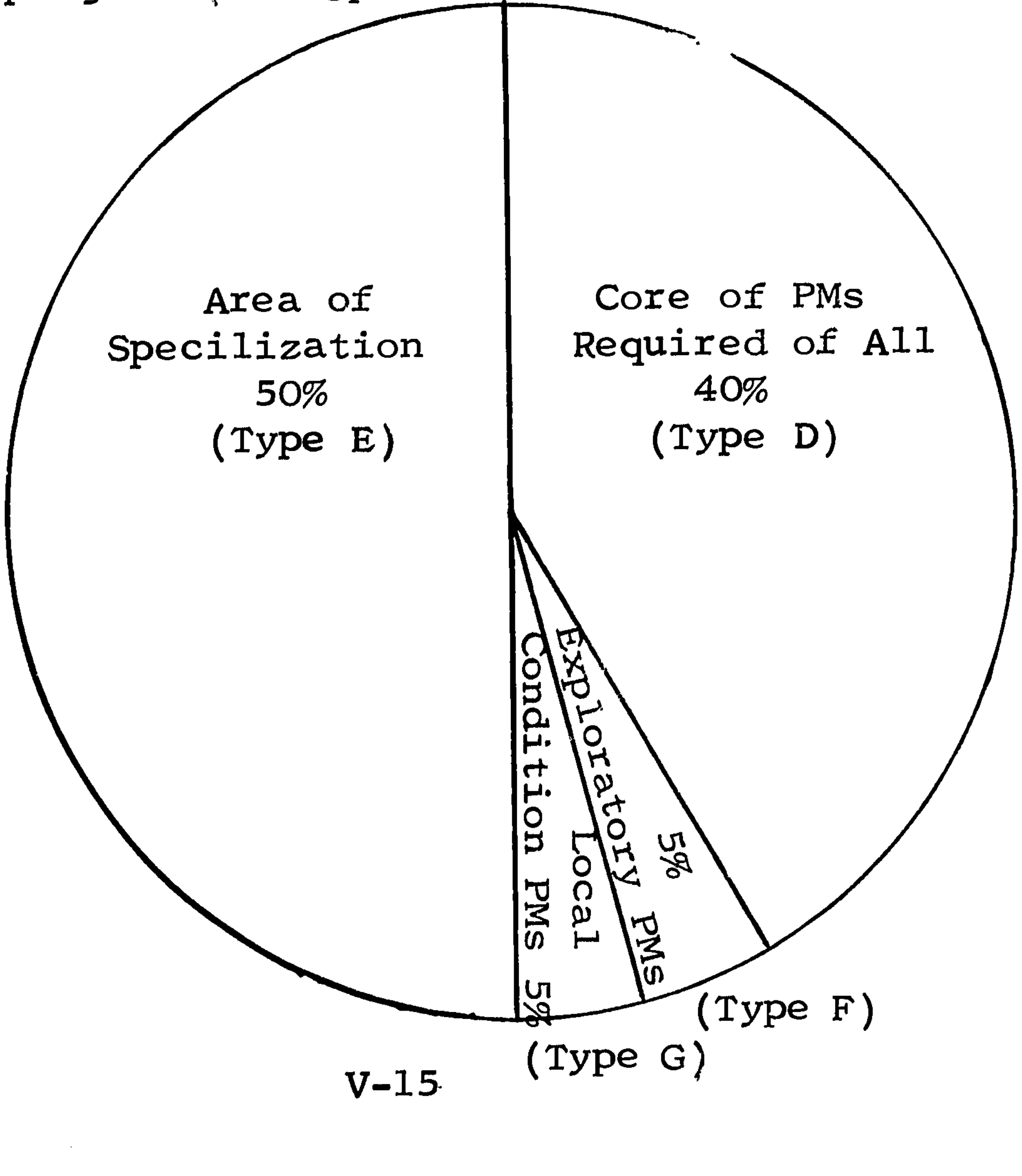
5.01.25 Instructional improvement and professional development in the specialist program provide for self-evaluation, study of new techniques of instruction, and continued general development as a professional educator. Activities in this area are essentially individual in origin and utilize resources provided by both the local school district and the university.

5.01.26 PMs for specialization and exploration are provided to continually increase the competence and effectiveness of the teacher. A portion of these PMs are required of all as a common core. Others are sequentially arranged to give breadth and depth in a selected area, and still others provide flexibility for exploration. PMs are developed and dispensed by the university and are carried out in cooperation with either the advisor or local school district supervision.

5.01.27 Diagram of specifications for study sequence for specialist's program.


Preservice Program
20%
40%
40%
1. Specialized Training related to Local Conditions
2. Instructional Improvement and Professional Development
3. Common Core of Basic Content
20%
60%
20%
Estimated Months
23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

5.01.28 Diagram of specifications for distribution of emphasis among areas for study in specialist's program (see specifications for PMs 5.02.20).



5.02 Specifications for Proficiency Modules (PMs)

Definition. A proficiency module is a published guide which is designed to direct individual student learning behavior in studying a particular subject or topic or in undertaking particular activities in a laboratory.

5.02.01 There are seven essential parts to a complete PM (see Specifications 5.02.02 through 5.02.08).

5.02.02 Classification. A brief indication of the specific subject or behavioral area of concern (a topic) and an indication of the subject area group with which it is associated, its type, and the block to which it belongs.

5.02.03 General directions. A general explanation to the student as to how to proceed in undertaking the PM. (For example, it may explain: (a) how to arrange to take the pretest, (b) where to find materials not contained in the PM, (c) how to arrange for field experiences which are specifically required by the PM, (d) where to locate technological equipment required for use with the PM, (e) when and how to arrange for the posttest. and (f) how to get special explanations or help when needed.)

5.02.04 Content. The teacher performance specifications contained in Specifications 3.00 (broadly inclusive of definitions, facts, concepts, thought processess, motor skills, and attitudes) which the student is to acquire as a result of carrying out the learning tasks prescribed in the PM.

5.02.05 Prerequisites. A list of the essential subject matter, thought processes, skills, and attitudes which the student must possess in order to undertake the PM. (For example, if a learning activity within the PM requires that the student, while working with pupils, write in manuscript on a blackboard, then a prerequisite is that the student have the skill to write legibly in manuscript on a blackboard.)

5.02.06 PM pretest. A diagnostic evaluation unit developed on the basis of the content (see Specification 5.02.04) which contains appropriate devices (paper-pencil tests, checklists, performance scales, etc.) designed to determine the student's initial status in relation to the content to be learned. It is not contained in the students' edition of the PM.

5.02.07 Learning tasks. A multiple series of learning activities adjusted to individual differences designed to be completed by the students. They are prepared by specialists as the most efficient known means for guiding students toward the acquisition of the performance behaviors. (see Specifications 5.02.09 and 5.02.16).

5.02.08 PM posttest. A diagnostic evaluation unit based on the content (see Specifications 5.02.04) which contains appropriate devices (paper-pencil tests, checklists, performance scales, etc.) designed to determine the student's status in relation to the content after he has completed particularly assigned learning tasks. It is not contained in the students' edition of the PM.

5.02.09 There are four essential parts to each PM learning task (see Specifications 5.02.10 through 5.02.13).

5.02.10 Purpose. An explanation to the student as to why it is essential to pursue this particular activity telling what knowledges, processes, skills, and/or attitudes he will acquire as a result of undertaking it.

5.02.11 Resources. A list of specific resources which he is required to use to carry out the task and where he can find them. (These resources may include such reference items as books, films, TV, tapes, audio tapes, filmstrips, syllabi, charts, computer instruction programs, scientific equipment, microfilms, "mini-lab" films, spefic elementary school classroom situations, and clinics.)

5.02.12 Procedures. Detailed instructions to the student as to what learning behaviors he is to perform in relation to the purposes. (These learning behaviors may include such activities as finding the answers to questions, making an observation and preparing a written record of it, participating in a seminar, consulting with a specialist, summarizing viewpoints in writing, preparing lesson plans, outlining, preparing a chart depicting the sequence of a procedure, viewing a demonstration on a TV recording, preparing a critical analysis of an observed lesson, presenting a prepared speech, and responding to paper-pencil items after hearing an audiotape of a lecture.)

5.02.13 Evaluation. A device reflecting evaluative criteria which the student uses to determine the extent to which he has acquired the knowledges, processes, skills, and/or attitudes he was intended to acquire through the performance of the learning task.

5.02.14 PMs are prepared by teams of specialists. Included in each team of specialists are subject specialists from disciplines related to the subject area, specialists in learning and human development, specialists in curriculum and teaching methods, specialists in educational evaluation, and practitioners from elementary school systems. (For example, the language arts PM team includes specialists from the following: written composition including rhetoric, speech, American and English literature, children's literature, reading, curriculum and instructional methods educational psychology including child development, educational evaluation, and elementary school teaching.)

5.02.15 The learning tasks within the PMs utilize the methodological approaches which are regarded by specialists in learning as the most efficient means of guiding the students in acquiring the content. (For example, computer assisted instruction (CAI) is used only when CAI is regarded as the most effective means for achieving the desired end. Similarly, audiovisual learning tasks are employed in the PMs only when these learning materials are regarded as more effective than alternate approaches such as lecture-discussion or reading. Many learnings such as skills in the application of cognitive processes and the utilization of motor skills cannot be learned effectively through reading, listening, or speaking-learning tasks, but must be approached through social interaction in seminars or repetitive performance of motor activity under supervision.)

5.02.16 Learning tasks within the PMs provide alternative paths for students to acquire particular characteristics. (For example, it is recognized that some students learn certain material more effectively through listening activities while others learn the same material far more effectively through reading activities. PMs provide alternate paths within the learning task's parts to allow for these differences.)

5.02.17 Learning tasks not only present that content from Specifications 3.00 normally found in a course of study, parts of syllabi, lecture topics, or textbook chapter learnings, but also guide students in learning thought processes, motor skills, and attitudes. The construction of these latter learning tasks requires creativity on the part of those involved in their construction, and places much dependence on activities which bring the student into special laboratories, practical laboratories, seminars, field trips, and observation situations. Frequently, learning tasks which give emphasis to interpersonal relations are required to accomplish the desired end.

5.02.18 The number of PMs within a subject area and the length of time and effort required of the average student to complete them varies. (Some variables which affect number, time, and effort are the nature of the topic, its importance to performance, the extensiveness of the skill and attitude behavior change required, and the level for which it is presented.)

5.02.19 There are eight types of PMs. The term types refers to classes of PMs which group themselves around common functional relationships. These types are:

Type A	A sequence of basic PMs required for all students in the preprofessional program. (Includes orientation PMs which acquaint the students with the nature of the program.)
Type B	A sequence of basic PMs required for all students in the professional program.
Type C	A sequence of special PMs required for students electing the PM area grouping indicated in the left column as a teaching area of competency.
Type D	A sequence of basic PMs required of all students in the inservice program.
Type E	A continuing sequence of PMs in one area of specialization required for all students enrolled in the specialist programs.
Type F	A group of exploratory PMs in subject areas not selected as a teaching area of emphasis during the preservice program.
Type G	A group of special purpose PMs designed to meet local conditions or needs.
Type H	PMs which are developed by a learner (or group of learners) rather than by specialists which the student(s), purposes to his (their) advisors for acceptance either as special enrichment or as a reasonable substitute for a required PM.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Social Studies	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Natural Sciences	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mathematics	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fine Arts	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Art	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Music	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Foreign Languages	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Health Education	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Professional Education	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Human Development & Learning	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Instructional Media	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pupil Personnel Services	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Professional Development	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Curriculum Planning and Development	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
School Community Coordination	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Evaluation	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Social Foundations of Educ.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Percentage of Effort	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

5.02.21 PMs in the professional education Type B group are provided in two or more forms in localities where state certification specifications require specialization of elementary teachers for instructing children of defined age ranges within the total age range normally assigned to the elementary school. For example, should teaching certificates be issued for age ranges 3-9, and 6-12, then the PMs in the professional education Type B group would be provided in two forms. Both forms would be similar in content. However, one form would focus on the teaching of children 3-9 years of age, and the other would focus on the teaching of children 6-12 years of age. (By focus on is meant that such items as the illustrations used, the laboratory experiences required, the instructional materials analyzed, the equipment mentioned, and the standardized tests reviewed are more suitable for one age subgroup than the other.)

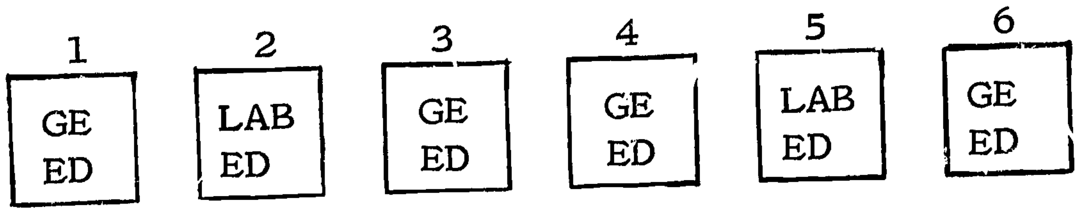
5.02.22 The sequence for each preservice program (preprofessional and professional) is divided into PM blocks of related studies. These blocks must be taken in the sequence in which they are arranged. That is, all PMs in any one block being undertaken must be completed before the student is regarded as having met the prerequisites for the next block of PMs.

5.02.23 PM blocks vary from each other in the kinds of PMs included and in the anticipated time for the average qualified student to complete the work outlined in the PM block. (For example, Block 1 of the preprofessional program contains PMs in general education including language arts, social science, natural science, health education, and fine arts, and in professional education. The student must complete all of the PMs in Block 1 before he is permitted to start the PMs in Block 2. The PMs in Block 2 are different from those in Block 1. There are PMs for laboratory practice, and the professional education PMs differ from those found in Block 1.

Also, the estimated time to complete the PMs in Block 2 is much shorter than for those in Block 1.

5.02.24 There are six blocks of PM requirements in the preprofessional program (see diagram of Specifications 5.02.15).

5.02.25 Diagram of specifications for sequence of PM blocks for preprofessional program. For more detailed specifications of content and relative emphasis given to each block see Specifications 5.01.



Legend:		
	GE	General Education PMs
	ED	Paraprofessional and Professional Education PMs
	LAB	Practical Laboratory Experience PMs
	1-6	Sequence Number for PM Block

5.02.26 There are ten blocks of PM requirements in the professional program (see Diagram of Specifications 5.02.16).

5.02.27 Diagram of specifications for sequence of PM blocks for the professional program. For more detailed specifications of content and relative emphasis given to each PM block see Specifications 5.01.

1	2	3	4	5
GE AC ED	LAB ED	GE AC ED	LAB ED	GE AC ED
6	**7**	**8**	**9**	**10**
GE AC ED	LAB ED	AC ED	INT ED	AC ED

Legend:		
	GE	General Education PMs
	ED	Professional Education PMs
	LAB	Practical Laboratory Experience PMs
	AC	Area of Competency PMs
	INT	Internship
	1-10	Sequence Number for PM Block

5.02.28 PMs for the specialist (inservice) program sequence of PMs are arranged in parallel by types (see diagram of Specifications 5.02.20).

5.02.29 Each type of PM grouping of the specialist (inservice) program (D, E, F, and G) has a specified sequence but PMs from all groups need not be undertaken concurrently. Sequences are determined by conference of inservice student and advisor.

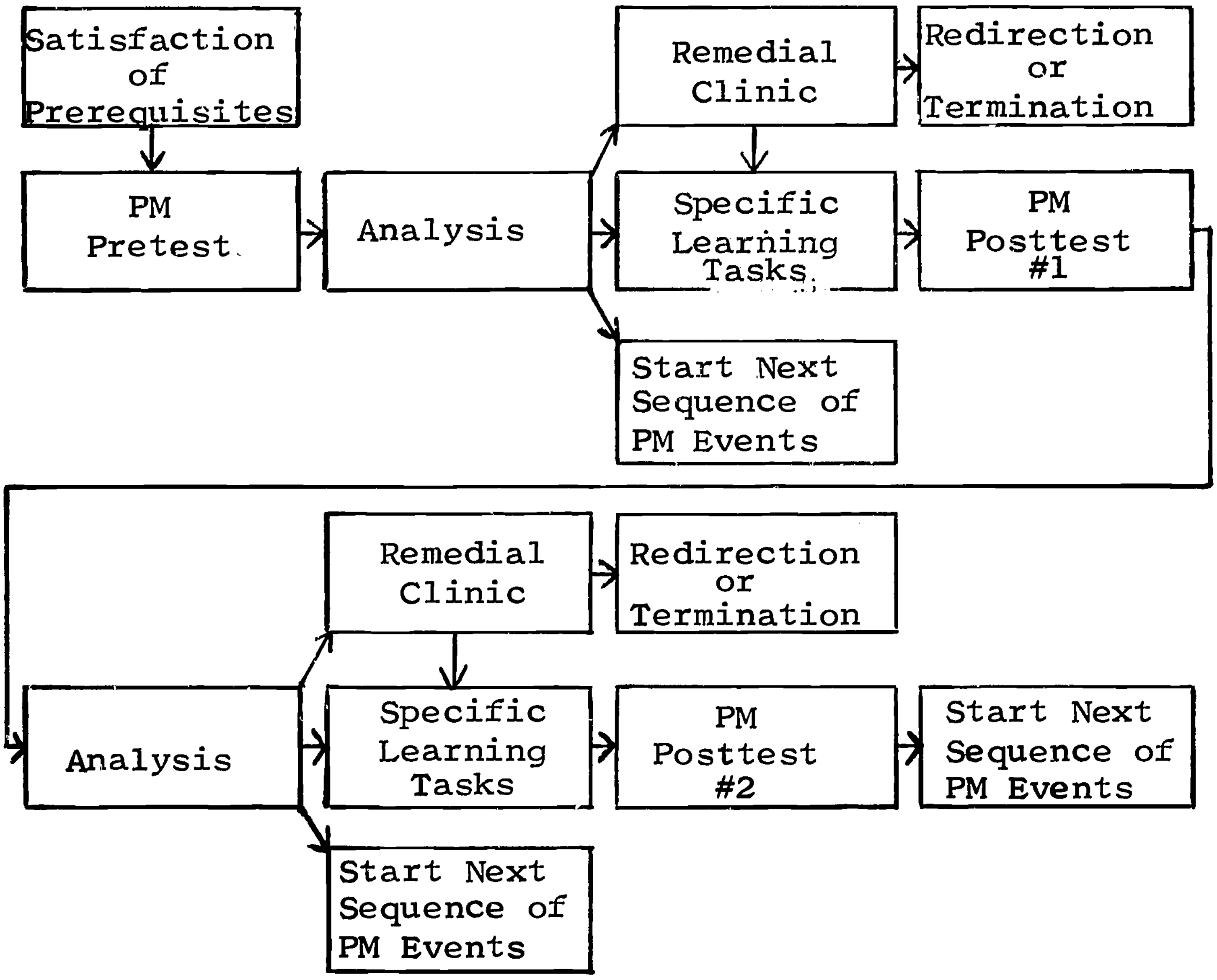
5.02.30 Diagram of specifications for sequence of study for inservice program. For more detailed specifications regarding content see Specifications 5.01.21 through 5.01.28.

Type D - Area of Specialization
Type E - Required of all
Type F - Exploratory
Type G - Special Purpose

5.02.31 Within a given PM block or prescribed sequence a student paces himself in undertaking the learning tasks. He may move as rapidly as he is capable of doing or as slowly as is necessary to complete the requirements.

5.02.32 Provisions for individualization of instruction are made by a system of events applicable to each PM undertaken by the student (see diagram of specifications for sequence of PM events 5.02.21).

5.02.33 Diagram of specifications for sequence of events designed to individualize instruction.


Satisfaction of Prerequisites
PM Pretest
Analysis
Remedial Clinic
Redirection or Termination
Specific Learning Tasks
PM Posttest #1
Start Next Sequence of PM Events
Remedial Clinic
Redirection or Termination
Analysis
Specific Learning Tasks
PM Posttest #2
Start Next Sequence of PM Events
Start Next Sequence of PM Events

5.02.34 PM pretests for those PMs designed to guide students in practical laboratory experiences are administered after the student is judged to have had sufficient time in the laboratory setting to exhibit those qualities reflected in the content of the PMs. For example, a student who has satisfied the prerequisites and is beginning a PM in English composition may begin the sequence of events outlined in diagram of specifications immediately with a pretest. However, were he to have met the prerequisites for beginning a PM in practical laboratory experience, he would not receive the pretest until he had had a short period of on-the-job activities in the laboratory setting.

5.02.35 PM pretests and posttests are analyzed by teams of educational and subject specialists who, after completion of the analysis, recommend action to be taken.

5.02.36 Students who demonstrate a defined satisfactory mastery level of proficiency on PM pretests are not required to undertake the PM learning tasks.

5.02.37 Students who demonstrate a defined satisfactory mastery level of proficiency on some phases or parts of a PM pretest, but not on other parts, are required to undertake only those parts in which they failed to demonstrate a satisfactory level of mastery.

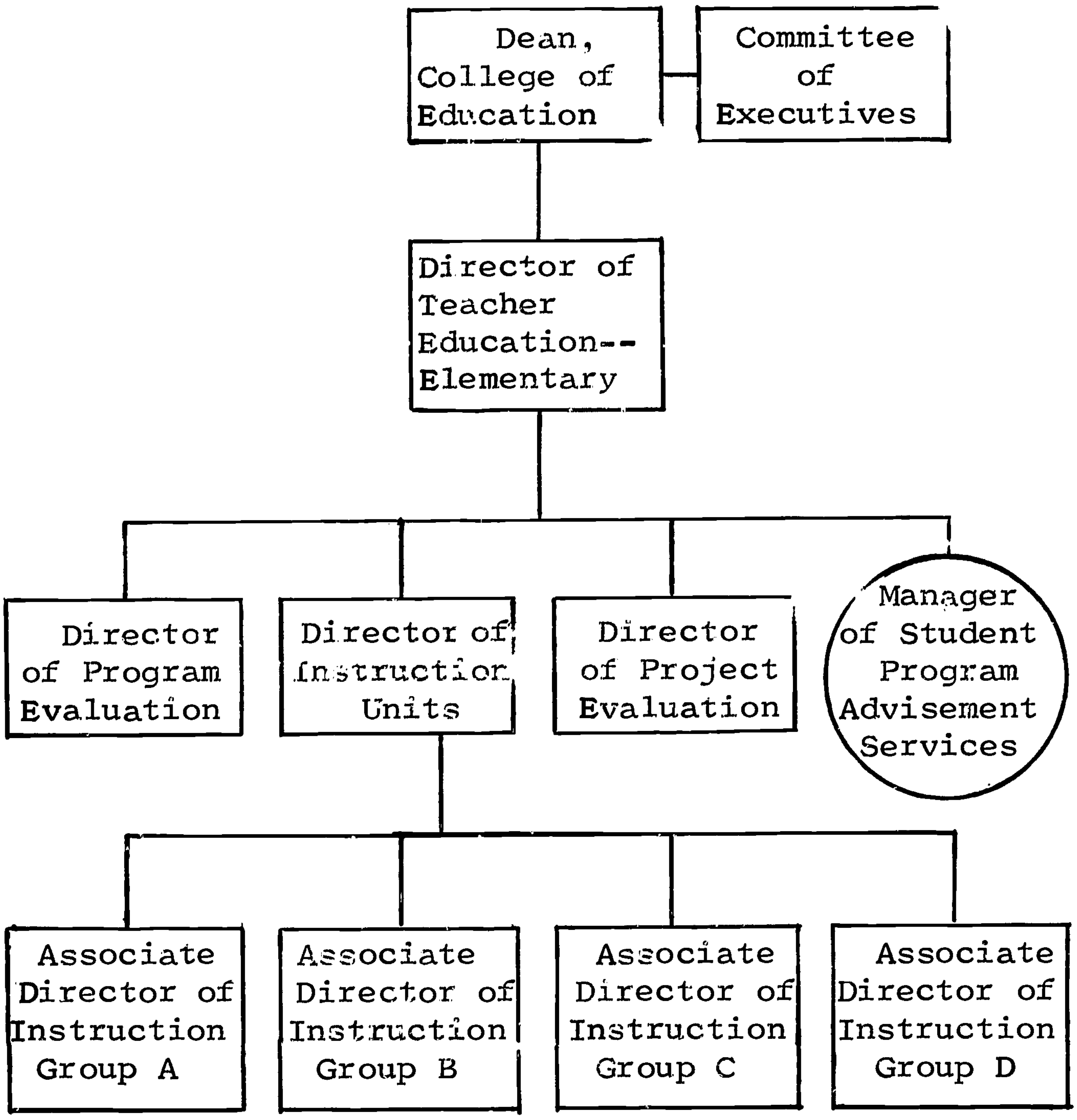
5.02.38 Students who, as a result of analysis, are regarded as handicapped or seriously deficient are referred to a remedial clinic for rehabilitation, redirection, or termination of study.

5.03 Specifications for Administrative Organization

5.03.01 The basic administrative structure establishes direct relationship between the Director of Teacher Education--Elementary, the College of

Education, and all other colleges, departments or other units responsible for the education of preservice and inservice elementary teachers (see diagram of specifications for basic administrative organization 5.03.02).

5.03.02 Diagram of specifications for basic administrative organization. Note: Professorial personnel are indicated by boxes and managerial personnel, who are non-professorial, but who facilitate and coordinate the work of the professorial staff, are indicated by circles.


Dean, College of Education
Committee of Executives
Director of Teacher Education--Elementary
Director of Program Evaluation
Director of Instruction Units
Director of Project Evaluation
Manager of Student Program Advisement Services
Associate Director of Instruction Group A
Associate Director of Instruction Group B
Associate Director of Instruction Group C
Associate Director of Instruction Group D

5.03.03 The Dean of the College of Education is responsible for all policies pertaining to the personnel, administration, and operation of the program. As Chairman of the Committee of Executives, he coordinates and implements the necessary cooperative agreements between the program and the various colleges, departments, and other units responsible for the education of preservice and inservice elementary teachers. The Director of Teacher Education Programs--Elementary reports directly to the Dean of the College of Education.

5.03.04 The Committee of Executives is composed of the Deans of all colleges responsible for the education of preservice and inservice elementary teachers, superintendents of cooperating school districts, representatives of the state department concerned with education. This group commits the necessary resources from their area of responsibility needed to implement the program, provides channels of communication and coordination between the represented groups, evaluates and approves mutually inclusive items of business, and provides policy direction within the limits of its advisory capacity.

5.03.05 The Director of Teacher Education--Elementary holds the doctorate degree and has experiences in elementary education and administration. He is responsible for staffing and implementing the program. He is responsible for directing the development and implementation of the basic materials and the organization of the program. In addition, he coordinates through the Committee of Executives the activities of departments, colleges, and other units as their activities pertain to the program. He is the chief administrative officer and reports directly to the Dean of the College of Education

5.03.06 The Manager of Student Advisement holds the master's degree or higher and has experience as an instructor or counselor in higher education. He is familiar with program requirements for admission, program sequences, transitional and terminal degree programs, and with the general rules and policies of the institution. He must also be familiar with state certification requirements and with other regulatory or professional requirements or recommendations influencing the professional standing of preservice and inservice elementary teachers. He is responsible for the development of all preadmission and orientation services for students prior to their entering the program, and coordinates the assignment of staff members assigned advisement responsibilities. He is responsible for the development of written materials for student and staff use that pertain to advisement, and supervises the work of the coordinators of preprofessional, professional, and specialist advisement. He reports to the Director.

5.03.07 The Director of Instruction holds the doctorate degree, has extensive professional educational experience in elementary schools and in higher education. He has direct responsibility for the curriculum structure and supervises the instructional program for the preservice and inservice education of teachers. He coordinates the development of instructional materials including the editing and format responsibilities for the publication of proficiency modules (PMs). He provides supportive services to each of the individual Instructional Unit Advisory Councils of which he is an ex officio member. He reports directly to the Director.

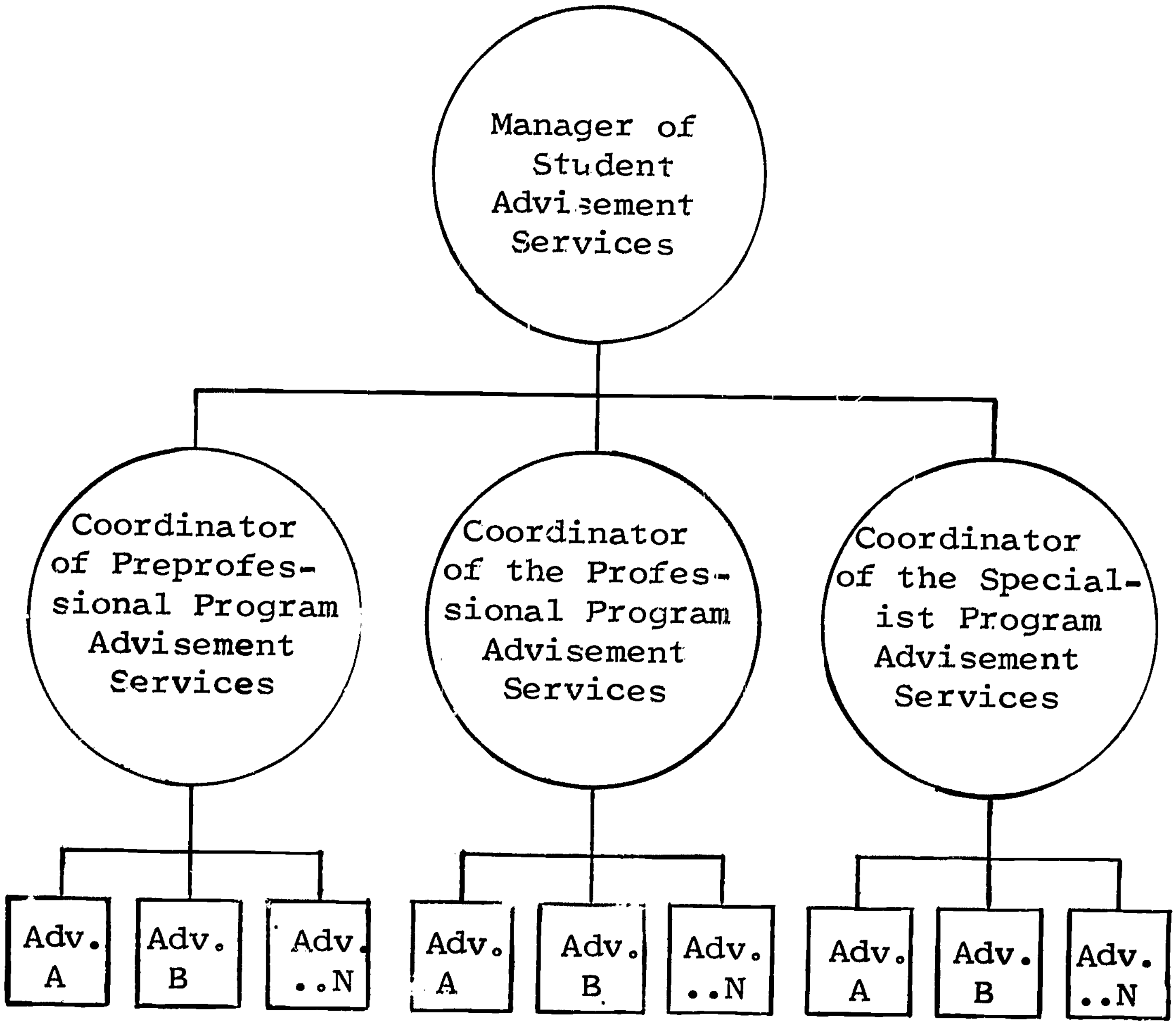
5.03.08 The Director of Program Evaluation holds the doctorate degree and has extensive experience in the fields of tests and measurement, statistics, data processing and retrieval, etc. He is responsible for the testing and scoring of all PM pre- and posttests. He is responsible for operating data retrieval and dissemination systems that parallel the organizational structure of the project. He institutes and administers follow-up studies of graduates and is responsible for individual or special testing of students with the approval of the Director.

5.03.09 The Director of Project Evaluation holds the doctorate degree and has extensive experience in evaluative designs and procedures in all phases of the program. He has no operational responsibilities and has no involvement or commitments that would bias an objective evaluation of the program's success. He is responsible for establishing and coordinating the work of a panel of outside consultants who will evaluate the operation of the various components of the program. He is a member of the Committee of Executives.

5.03.10 The Student Program Advisement Services directs the longitudinal sequence of advisee-advisor relations in the program. It is administratively responsible for the advisee program at preprofessional, professional, and specialist levels. Within each of these, it maintains necessary student records, serves as a communication link with other units, and assigns advisees to staff members.

5.03.11 The organization of the Student Program Advisement Services reflects its managerial functions. Professional assistance given to preservice and inservice teachers continues to be the responsibility of the professional staff.

5.03.12 Diagram of specifications for the organization of Student Program Advisement Services


Manager of Student Advisement Services
Coordinator of Preprofessional Program Advisement Services
Coordinator of the Professional Program Advisement Services
Coordinator of the Specialist Program Advisement Services
Adv. A
Adv. B
Adv. ..N
Adv. A
Adv. B
Adv. ..N
Adv. A
Adv. B
Adv. ..N

5.03.13 The Coordinator of Preprofessional Program Advisement Services holds the bachelor's degree and has administrative experience. He assists the Manager of Student Advisement in the development and implementation of all preadmission and orientation services. He makes advisee assignments for program advisors and assists advisors in interpreting and communicating the preprofessional program requirements and sequence. He reports directly to the Manager of Student Advisement.

5.03.14 The Coordinator of Professional Program Advisement Services holds the bachelor's degree and has administrative experience. He assists the Manager of Student Program Advisement Services in the development and implementation of all orientation services pertaining to the bachelor's degree and teaching certification. He makes advisee assignments for professional advisors and assists advisors in interpreting and communicating the professional program requirements, sequence, and certification requirements. He reports directly to the Manager of Student Program Advisement Services.

5.03.15 The Coordinator of Specialist Program Advisement Services holds the master's degree or higher and has administrative experience. He assists the Manager of Student Program Advisement Services in the development and implementation of all preadmission (graduate school) and orientation services. He makes advisee assignments for specialist advisors and assists advisors in interpreting and communicating program requirements, sequence, and specialist's requirements, He reports directly to the Manager of Student Program Advisement.

5.03.16 All instruction is administered Instructional Units which are charged with the responsibility of constructing, administering, evaluating, and refining the program materials and activities which are assigned to that unit.

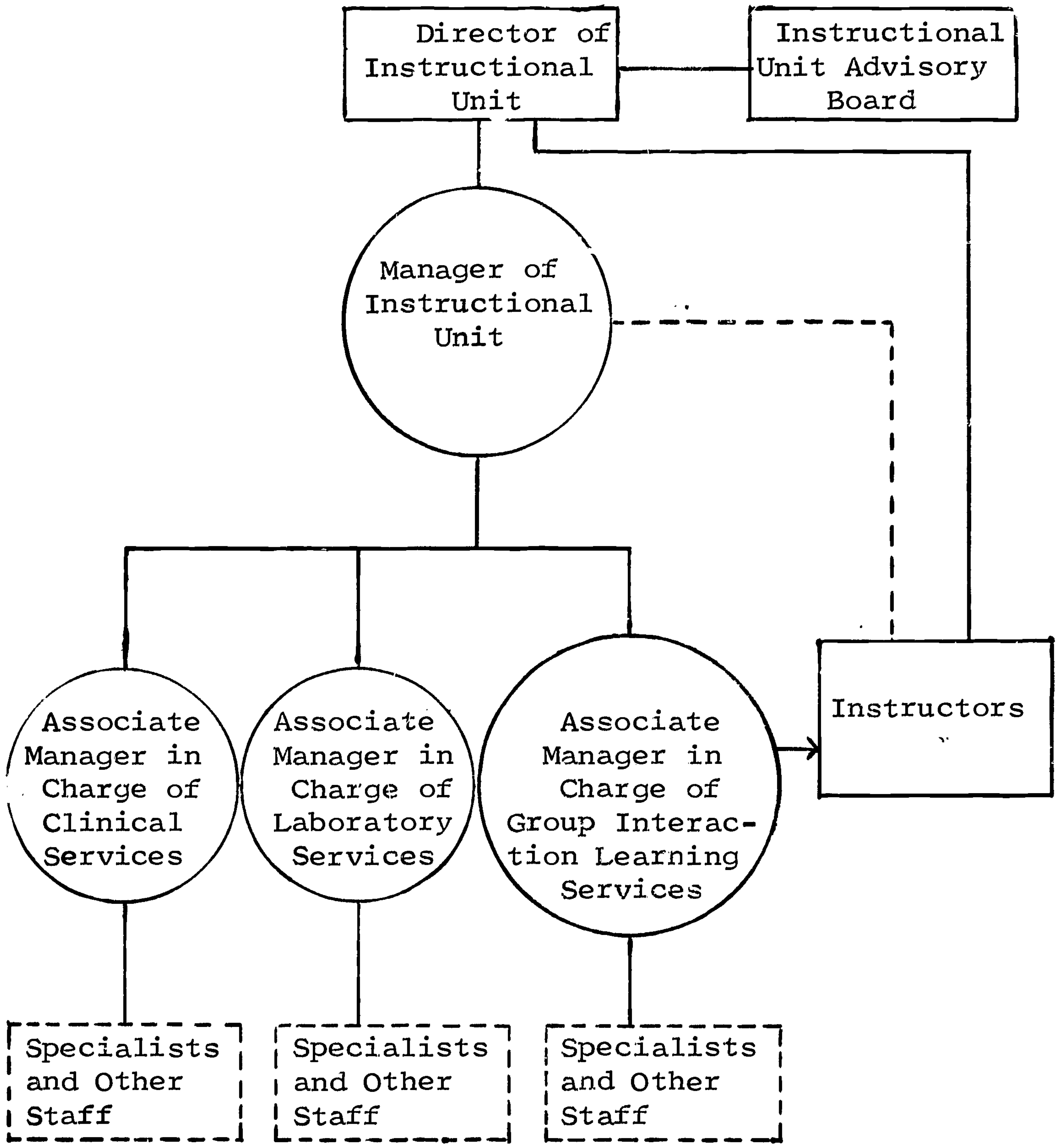
5.03.17 Diagram of specifications for the Instructional Units and the types of PMs for which each is responsible (see also diagram of specifications 5.02.02).

Instructional Unit	Types of PMs for which Unit is Responsible							
	A	B	C	D	E	F	G	H
Language Arts	X	X	X		X			X
Social Sciences	X	X	X		X	X		X
Natural Sciences	X	X	X		X	X		X
Mathematics	X	X	X		X	X		X
Art	X	X	X		X	X		X
Music		X	X		X	X		X
Foreign Language			X		X	X		X
Health Education	X		X		X	X		X
Preservice Education	X	X						X
Human Development			X	X	X	X		X
Instructional Media				X	X	X	X	X
Pupil Personnel Services					X	X	X	X
Professional Development					X	X	X	X
Curriculum				X	X	X	X	X
School Community coordination					X	X	X	X
Evaluation				X	X	X	X	X
Social Foundations				X		X	X	X

5.03.18 Each Instructional Unit is a separate administrative organization which provides the necessary resources for administering that portion of the instructional program for which it is responsible (see Specification 5.03.17).

5.03.19 Each of the four associate directors of instruction who assist the director of instruction as indicated in diagram of Specifications 5.03.02 is responsible for the functioning of a particular group of instructional units which have related functions and academic concerns. Group A consists of instructional units in the areas of language arts, foreign language, art, and music. Group B with units in the areas of mathematics, natural science, health education, and social sciences. Group C in the areas of professional education, curriculum and program development, professional development, instructional media, and social foundations. Group D consists of instructional units in the areas of human development and learning, pupil personnel, evaluation, and school-community coordination.

5.03.20 Diagram of specifications for the organization of each Instructional Unit.



Director of Instructional Unit
Instructional Unit Advisory Board
Manager of Instructional Unit
Associate Manager in Charge of Clinical Services
Associate Manager in Charge of Laboratory Services
Associate Manager in Charge of Group Interaction Learning Services
Instructors
Specialists and Other Staff
Specialists and Other Staff
Specialists and Other Staff

5.03.21 The Instructional Unit Advisory Board is composed of specialists (professorial rank) from the subject area and specialists (professorial rank) from the College of Education who are concerned for the educational experiences of preservice and inservice elementary teachers for whom they are responsible. Staff utilization, student assignments and productivity, and use of resources are approved by the Advisory Board. Program development is a major responsibility of the Advisory Board and is implemented through a close analysis and review of the PMs and the use of available resources, both human and otherwise, to meet learning objectives. The Chairman of the Advisory Board is an education specialist and Director of the Instructional Unit.

5.03.22 The Director of the Instructional Unit as Chairman of the Advisory Board performs the necessary functions to facilitate the work of the Board as presented in Specification 5.03.20 and supervises the work of the Manager of the Instructional Unit. He reports directly to the Director of the Center for Instruction.

5.03.23 The Manager of the Instructional Unit holds the bachelor's degree or higher and has administrative-management experiences, preferably in education. He is responsible for the acceptance of students, and for their assignment to instructors. He has management responsibility for the scheduling and utilization of the clinic, laboratory, and interaction resources based on the requests of advisors. He also is responsible for data flow to and from all units. He reports to, advises, and implements all recommendations of the Advisory Board, under the direction of the Director of the unit.

5.03.24 The Clinic is a separate component of each instructional unit and has as its responsibility, the development and implementation of programs to provide remedial and/or background experiences necessary for satisfying the requirements of the

PMs at the instructional unit. Clinic experiences are independent of PM requirements and are administered on an individual basis.

5.03.25 The Associate Manager in charge of Clinical Services holds the bachelor's degree or above in the subject of concern to the instructional unit and has administrative-managerial experience. He accepts referrals and with the assistance of the clinical specialists assigns them to professional personnel who can provide them the assistance they require.

5.03.26 The Clinical Specialists are instructors or professors who are especially competent in particular areas within the broader scope of concern of the instructional unit and assume the obligation of becoming Clinical Specialists only when their services are needed. Time allotments for performing clinical services are scheduled by the Manager of the instructional unit.

5.03.27 The Instructional Unit Central Resources Laboratory is a separate component of each instructional unit and serves two functions. First, it houses and administers all learning materials and equipment essential for the undertaking of PMs which are not readily available in other installations such as central libraries, language laboratories, and computer instruction centers. Second, it arranges for laboratory experiences required by PM learning tasks which involve outside facilities such as field trips, observations, practical laboratory experiences in public schools, and internships.

5.03.28 The Associate Manager in charge of Laboratory Services holds the bachelor's degree or above in the subject of concern to the instructional unit and has administrative-managerial experience. He facilitates the work of the Coordinator of the Instructional Unit Central Resources Laboratory and the Coordinator of the Field Laboratory Facilities. He is responsible to the manager of the instructional unit.

5.03.29 The Coordinator of the Instructional Unit Central Resources Laboratory holds the bachelor's degree or above, has managerial experience, possesses general knowledge of the area of concern of the instructional unit, and has a broad understanding of the materials and equipment essential for undertaking the study of the PMs for which the instructional unit is responsible. He is responsible for obtaining, organizing, and making available the instructional materials needed by the students. The staff which assists him includes specialists in educational media.

5.03.30 The Coordinator of Field Laboratory Facilities holds the bachelor's degree or above, has managerial experience, and a general knowledge of the area of concern of the instructional unit. His primary job is to obtain the needed field facilities, and arrange schedules as required by students pursuing the PM learning tasks.

5.03.31 Group Interaction Learning Services are provided as a separate component of each instructional unit and provide professor-student or student-student interaction at such time as the PMs require it or on the request of students or instructors. Scheduling and administrative organization of such activities are the responsibility of the associate manager in charge of group interaction learning services. Examples of such activities are lectures, seminars, workshops, debates, recitals, art shows, special demonstrations, reviews of current events, and panel discussions.

5.03.32 The Associate Manager in charge of Group Interaction Learning Services holds the bachelor's degree or higher in the area of concern to the instructional unit, and has managerial experience.

5.03.33 The Specialist in Group Interaction Learning are instructors or professors who are especially competent in particular areas within the broader scope of concern of the instructional unit and assume the obligation of becoming specialists in group interaction learning only when their services are needed. Time allotments for performance of these services are scheduled by the manager of the instructional unit.

5.03.34 Instructors hold the academic rank of instructor or higher depending upon the level of the students with whom they are working and the extent of their knowledge of particular elements of the field of learning represented by the instructional unit. Their primary responsibilities are guiding students through the PMs when their services are needed. In this primary role they receive data from various evaluative measures and judgments on their advisees, recommend sequences of PMs or learning tasks, make referrals to clinics, arrange for laboratory experiences as required, and when necessary make provisions for group interaction learning experiences. Other responsibilities include serving as a member of the total instructional unit team by performing such functions as serving as clinicians, laboratory supervisors, group interaction team leaders, demonstrators, and lecturers. Also, as members of the instructional unit team they perform the work involved in the continual updating, revision, and improvement of the PMs. Time allotments for their various duties are scheduled by the manager of the instructional unit upon the recommendation of the director of the instructional unit.

5.04 Specifications for Laboratory Facilities and Experiences

5.04.01 There are five kinds of laboratory facilities provided: General Resources Laboratories, Instructional Unit Central Resources Laboratories, Instructional Unit Field Laboratory Facilities, Instructional Unit Clinics, and Instructional Unit Group-interaction Laboratories.

5.04.02 General Resources Laboratories include facilities which are used by students and staff of universities, colleges, and schools for learning activities. Examples: central libraries, listening laboratories, computer instruction centers, reviewing rooms, zoos, board of education curriculum laboratories, audio-visual materials centers, and computer equipment laboratories.

5.04.03 Instructional Unit Central Resources Laboratories are a part of the facilities of each instructional unit in the program. It houses and provides all learning materials and equipment essential for the undertaking of PMs of that instructional unit which are not readily and conveniently available in General Resources Laboratories. Examples: books, articles, films, microfilms, charts, tables, models, recordings, programmed materials, chemicals, musical instruments, art supplies, and gymnastic equipment.

5.04.04 Instructional Unit Field Laboratory Facilities are provided by each Instructional Unit through the manager in charge of laboratory services who employs a coordinator whose primary job is to obtain the needed field facilities and arrange schedules as required by students engaging in learning tasks contained in PMs. Examples: elementary school classrooms, individual children for case studies, health clinics, museums, rock quarries, historical sites, wildlife observation sites, and government agencies.

5.04.05 Clinical services are provided by each instructional unit to give remedial, and/or rehabilitation assistance to students having difficulties because of handicaps.

5.04.06 Each Instructional Unit provides laboratory experiences in group interaction learning. The unit manager of these services schedules such activities as lectures, seminars, workshops, debates, recitals, art shows, and panel discussions as they are required by the PM learning tasks or especially requested by instructors or students.

5.04.07 Two practical laboratory experiences are required during the preprofessional program. They occur during PM Blocks 2 and 5. It is anticipated that the average qualified student will require 6 weeks to complete each of these assignments.

5.04.08 The practical laboratory experience which occurs in PM Block 2 of the preprofessional program focuses on paraprofessional classroom activities and is carried out with children in early childhood.

5.04.09 The practical laboratory experience which occurs in PM Block 5 of the preprofessional program focuses on paraprofessional activities and is carried out with children in later childhood.

5.04.10 Three practical laboratory experiences are required during the professional program. They occur during PM Blocks 2, 4, and 7. It is anticipated that the average qualified student will require 6 weeks to complete each of these assignments.

5.04.11 The practical laboratory experience which occurs in PM Block 2 of the professional program focuses on professional activities and is carried out with children within the student's target age group with special concern for allowing the student to work within the teaching area of competency which he has selected.

5.04.12 The practical laboratory experience which occurs in PM Block 4 of the professional program focuses on professional activities and is carried out with children younger than those within the student's target age group.

5.04.13 The practical laboratory experience which occurs in PM Block 7 of the professional program focuses on professional activities and is carried out with children older than those within the student's target age group.

5.04.14 Placement in practical laboratory experiences is such that the students have the opportunity to work with children of various socioeconomic and ethnic characteristics.

5.04.15 The preservice internship occurs within the 10th PM Block of the professional program. It is anticipated that the average qualified student will require 10 weeks to complete this requirement.

5.04.16 The preservice internship is carried out with children within the intern's target age group and the intern is given opportunity to give special emphasis to provide instruction in his teaching area of competency.

5.05 Specifications for Student Program Advisement

5.05.01 Student program advisement services provide students with continuous advisement throughout the entire program.

5.05.02 When the student enters the preprofessional program he is assigned an advisor who is an instructor or professor in elementary education. This person remains his advisor so long as he remains in the preprofessional program.

5.05.03 When a student enters the preprofessional program he is assigned an advisor who is an instructor or professor in elementary education whose specialty is related to the student's selected teaching area of competency.

5.05.04 When a student enters the specialist program he is assigned an advisor who is a professor whose specialty is the area in which the student has chosen to specialize.

5.05.05 Advisors of students in the preprofessional program and the professional program hold group meetings weekly with their advisees to discuss program problems of general concern, and current problems of professional concern in elementary education which are not likely to be covered in PMs.

5.05.06 All advisors provide time schedules of office hours when individual students may consult with them concerning matters which are not of general concern during the regularly scheduled meetings.

5.06 Specifications for Student Orientation Programs

5.06.01 An orientation program is held for students entering the preprofessional program during the week prior to their enrollment in PM Block 1. This orientation program is planned by the Coordinator of Preprofessional Program Advisement Services with the assistance of the representation from the instructional units for Language Arts, Social Sciences, Natural Sciences, Music, Art, Health Education, Professional Education, and educational practitioners from elementary school systems.

5.06.02 The preprofessional orientation program is designed to acquaint the students with the educational system, the location of laboratory facilities, the procedures for completing PMs, the credit system, and to inform them of their obligations and privileges.

5.06.03 During the preprofessional orientation period, students are assigned to their program advisors and meet with them for group discussions.

5.06.04 During the preprofessional orientation period students are assigned to instructors from the various instructional units in which they will be working to meet with them in groups for an introduction to the procedures required of them in undertaking the initially assigned PMs.

5.06.05 Preprofessional program advisors advise students individually regarding the number and kinds of PMs with which to begin their first PM block, on the basis of individual records of the student's past achievement, estimated potential, and other related conditions.

5.06.06 Students who complete the preprofessional program and are ready to enter the professional program receive their initial orientation to the program, individually, from their newly assigned advisor.

5.06.07 Whenever it is feasible to do so because of the qualifications of the advisor and the choices of sequences of the students, the same advisor is retained by the student throughout the entire program.

5.07 Specifications for Staff for the Model Program

Note: Classifications 5.03, 5.04, and 5.05 present specifications for the individual administrative, managerial, clinical, and instructional staff required to carry out the model teacher education program. However, the GEM staff regards as a necessary part of this report the formulation of certain general specifications for personnel which are essential if the implementation (including the development of PMs) is to be successful.

5.07.01 The staff responsible for designing the details of the proposal for implementation of the model program including the development of the PMs are the key staff for carrying out the model program when it is initiated.

5.07.02 Plans for initiating the model program as well as plans for the training of the staff personnel to carry out the model program approach the tasks through the use of system analysis. For example, through planning conferences, seminars, and workshops staff members prepare such essential instruments as summary system networks, PERT charts, flow charts, and time lines for the initiation and implementation of the model program.

5.07.03 Persons selected to serve on the model program staff must provide enthusiastic endorsement of the program and the system for implementation after they have become fully aware of the nature of the total demands which will be made of them in time and effort.

5.07.04 Persons selected to serve on the model program staff must be willing to submit themselves to a study of those essential features of the program requirements with which they may be initially unfamiliar. For example, a professor of English literature may not be familiar with what is regarded by specialists in learning as the most efficient means for organizing content to satisfy performance specifications of an affective nature. He must satisfy the specification of being willing to acquire knowledge of this sort and the skills which it requires before he is regarded as acceptable as a member of the staff.

APPENDIX A

JOB DESCRIPTION -- ELEMENTARY SCHOOL PERSONNEL

Job Description of Elementary School Personnel

Introduction

The various elementary school personnel are differentiated on the basis of proficiency level, degree requirements, and certification. The four main categories for elementary school personnel are aide, teaching assistant, certified elementary teacher, and specialist. Each proficiency level implies competency at the previous levels.

The aide performs a variety of important non-instructional tasks, gains valuable experience in the school setting, and occupies the initial salaried step in the career development of elementary school personnel. As such, no prerequisites beyond completion of high school are required for initiation into this occupational category.

The teaching assistant has the equivalent of about half of the degree and certification requirements for becoming a professional teacher. The tasks for this person are both instructional and non-instructional.

The certified elementary teacher has completed the requirements for a bachelor's degree and for certification. The tasks performed are largely instructional, with some time spent in essential non-instructional activities.

The specialist has completed certification and degree requirements equivalent to the sixth year of professional development. The specialist performs leadership and service tasks with other elementary school personnel and works periodically with children.

The following sections expand on the general function of these various personnel and present the appropriate activities at each level.

Activities of Aides

The role of the aide among elementary school personnel is non-instructional in nature, and activities are performed under the direction of the teacher. The aide performs no regular custodial duties (such as those regularly assigned to janitor or maid), and, also, performs no activities directly related to the planned instructional program. Within these limits, the general areas of responsibilities and duties of aides are:

Secretarial

1. Makes appointments.
2. Does clerical tasks--typing, duplicating, etc.
3. Maintains records--health, attendance, achievement.
4. Proctors tests.
5. Collects money--keeps records.
6. Scores--corrects learning experiences.

Pupil Supervision

1. Helps children take off and put on coats, boots, etc.
2. Monitors bus platform.
3. Assists playground activity.
4. Monitors study activities.

Technical

1. Sets up audio-visual materials.
2. Operates audio-visual materials.
3. Prepares audio-visual materials (transparencies, etc.)

Supplies

1. Puts away and catalogues new materials, supplies, and equipment.
2. Takes inventory.
3. Orders additional materials, when necessary.
4. Distributes materials.

Environment

1. Keeps classroom neat.
2. Checks temperature.
3. Puts away materials.
4. Decorates classroom as instructed.

Activities of Teaching Assistants

A second level of proficiency among elementary school personnel is that of teaching assistant. The teaching assistant performs both instructional and non-instructional duties, and, thus, assumes a more complex role. The teaching assistant is generally directed by the teacher and has responsibility for initiating and carrying out a variety of tasks.

A job description of the role of the teaching assistant requires a certain organizational framework for structure. This person spends time with children and away from children, and performs activities of both an instructional and non-instructional nature. A four-celled framework (see Figure A-1) is used to describe these functions. The numerals in each of the cells correspond to those used in the following list of activities of the teaching assistant.

	Activities directly related to instruction	Activities not directly related to instruction
Activities with children	1.00	2.00
Activities away from children	3.00	4.00

Figure A-1. Organizational framework--activities of teaching assistant.

1.00 Instructional Activities with Children

1.01 Reading and telling stories to pupils.

1.02 Taking charge of a small group working on a special project, while the teacher works with another group.

1.03 Helping pupils learn proper use of tools and equipment.

1.04 Helping pupils use a teaching machine.

1.05 Telling a pupil what happened, or helping him with subject material missed during absences.

1.06 Singing with a group of pupils.

1.07 Playing a musical instrument for the pupils.

1.08 Working directly with pupils in a teacher-introduced art project (bulletin board, Christmas decoration, etc.).

1.09 Helping pupils get ready for an assembly program.

1.10 Helping young children learn to use crayons, scissors, paste, paint, etc.

1.11 Helping pupils improve subject skills.

1.12 Helping pupils improve their manners.

1.13 Helping pupils understand teacher's directions.

1.14 Playing games with pupils, such as rhyming games, guessing games, finger games.

1.15 Interesting a restless pupil in some of the available activities.

1.16 Helping pupils learn how to settle arguments without fighting.

1.17 Listening to pupils talk about themselves (family, experiences out of school, etc.).

1.18 Talking with pupils about what they are doing when they are playing.

1.19 Listening to a pupil tell a story.

1.20 Listening to a pupil read his own written story, etc.

1.21 Listening to a pupil read.

1.22 Assisting a slow pupil in finishing work or catching up.

1.23 Acting out stories with pupils.

1.24 Organizing recess time into directed games and activities.

1.25 Taking a small group of pupils on a walk in the neighborhood.

1.26 Talking quietly with a pupil who is upset.

1.27 Helping students look up information in a book.

1.28 Assisting pupils in the library (picking out books, finding information).

1.29 Taking responsibility for the class for a few minutes when the teacher is called away.

1.30 Arranging and supervising games.

1.31 Observing children's behavior.

1.32 Copying lists on blackboard.

1.33 Assisting with assemblies and plays.

2.00 Non-instructional Activities with Children

2.01 Explaining school rules to pupils.

2.02 Supervising pupils while watching television or a film.

2.03 Showing pupils how to clean up and put away materials.

2.04 Operating equipment, such as movie projector, slide projector, tape recorder.

2.05 Keeping records, such as attendance and health records.

2.06 Collecting milk money, lunch money, selling tickets, etc.

2.07 Assisting children in feeding classroom pets.

2.08 Stopping pupils from fighting.

2.09 Putting on and taking off outdoor clothing (young children).

2.10 Giving first aid to a pupil.

2.11 Guarding doors of school.

2.12 Supervising playground before and after school.

2.13 Supervising recess time (free play).

2.14 Taking pupils to and from various places in school (such as lunchroom, nurse's office, principal's office, bathroom).

2.15 Helping pupils move from one activity to another.

2.16 Taking pupils home who are sick or hurt.

2.17 Weighing and measuring pupils.

2.18 Collecting milk money and supervising milk period.

2.19 Monitoring, when necessary.

2.20 Collecting enrollment fees and workbook money. Sending receipts home.

2.21 Collecting money, when necessary.

2.22 Collecting and tabulating permission slips.

2.23 Helping chaperone tours, when necessary.

2.24 Keeping attendance.

2.25 Arranging bulletin boards.

2.26 Distributing and collecting lesson materials.

2.27 Doing routine testing, such as administering the Dolch word list.

2.28 Helping with the proctoring of examinations.

2.29 Assisting in supervision of restroom periods.

2.30 Assisting in supervision of corridors and cafeterias.

2.31 Taking playground and door duty.

2.32 Assisting in fire drills.

3.00 Instructional Activities away from Children

3.01 Preparing audio-visual materials, such as charts, at the request of the teacher.

3.02 Filing seat work..

3.03 Making games, flash cards for teaching aids, and instructional materials.

3.04 Locating reference materials for teachers.

4.00 Non-instructional Activities away from Children

4.01 Filing and cataloging materials.

4.02 Duplicating materials.

4.03 Checking supplies.

4.04 Watering plants.

4.05 Getting classroom ready for next day.

4.06 Checking on temperature, fresh air, and lighting in the classroom.

4.07 Putting away pupils' toys and materials.

4.08 Following up on absences.

4.09 Making arrangements for parent-teacher conferences.

4.10 Keeping track of time, date, names.

4.11 Greeting parents and seeing that the 15-minute schedule is kept.

4.12 Making arrangements for tours.

4.13 Recording attendance and headings on report cards. Writing names on all card envelopes.

4.14 Preparing Metropolitan and Lorge-Thorndike tests.

4.15 Writing name, age, and other necessary information.

4.16 Stamping results on accumulative folders.

4.17 Arranging tables and chairs for spelling.

4.18 Distributing routine notices, such as PTA meetings.

4.19 Correcting standardized tests, workbook exercises.

4.20 Ordering supplies.

4.21 Returning rotating materials.

4.22 Filing reports, records, dittos, teaching materials.

4.23 Filing, mounting, and clipping interesting pictures from old magazines.

4.24 Telephoning about routine matters.

4.25 Running errands concerning professional matters.

4.26 Inventorying instructional material.

4.27 Listing new material.

4.28 Ordering replacements for worn material.

4.29 Arranging materials for work and play to be available when needed.

Activities of Certified Elementary Teachers

The third level of proficiency for elementary school personnel is that of certified teacher. This person holds the bachelor's degree and authorized certification. The duties and tasks of the teacher necessarily include both instructional and non-instructional activity.

These activities are organized into four categories duplicated from Figure A-1:

1. Instructional activities with children.
2. Non-instructional activities with children.
3. Instructional activities away from children.
4. Non-instructional activities away from children.

Within these four cells, the activities of the teacher are as follows:

1.00 Instructional Activities with Children

1.01 Reading and telling stories to pupils.

1.02 Deciding which pupils will need to work together in a reading group.

1.03 Deciding what a pupil should study.

1.04 Helping pupils learn proper use of tools and equipment.

1.05 Helping pupils use a teaching machine.

1.06 Helping pupils to use programmed materials.

1.07 Supervising pupils while watching television or a film.

1.08 Providing leadership in introducing or discussing a film.

1.09 Telling a pupil what happened, or helping him with subject material missed during absences..

1.10 Singing with a group of pupils.

1.11 Playing a musical instrument for the pupils.

1.12 Working directly with pupils in a teacher-introduced art project (bulletin board, Christmas decoration, etc.).

1.13 Helping pupils get ready for an assembly program.

1.14 Helping young children learn to use crayons, scissors, paste, paint, etc.

1.15 Helping pupils understand teacher's directions.

1.16 Helping pupils improve subject skills.

1.17 Helping pupils improve their manners.

1.18 Organizing recess time into directed games and activities.

1.19 Taking a small group of pupils on a walk in the neighborhood.

1.20 Taking groups of children on a trip.

1.21 Talking quietly with a pupil who is upset.

1.22 Helping pupils move from one activity to another.

1.23 Giving a pupil a chance to show he can do something well.

1.24 Helping pupils learn to play together (sharing toys and materials, taking turns).

1.25 Helping pupils look up information in a book.

1.26 Assisting pupils in the library (picking out books, finding information).

1.27 Assisting children in feeding classroom pets.

1.28 Playing games with pupils, such as rhyming games, guessing games, finger games.

1.29 Interesting a restless pupil in some of the available activities.

1.30 Helping pupils learn how to settle arguments without fighting.

1.31 Listening to pupils talk about themselves (family, experiences out of school, etc.).

1.32 Talking with pupils about what they are doing when they are playing.

1.33 Listening to a pupil tell a story.

1.34 Listening to a pupil read his own written story, etc.

1.35 Listening to a pupil read.

1.36 Assisting a slow pupil in finishing work or catching up.

1.37 Deciding what pupils need to do in a classroom.

1.38 Acting out stories with pupils.

1.39 Adapting and presenting curriculum materials in accord with the ability and mastery level of individual pupils.

1.40 Using media, equipment, supplies, and techniques appropriate to individual situations.

1.41 Adapting educational innovations where appropriate.

1.42 Analyzing pupil behavior to determine levels of mastery.

1.43 Refining teaching techniques (content, etc.) in accord with the needs of the pupils.

1.44 Determining mastery in relation to ability.

1.45 Determining areas of strength and weakness.

1.46 Working with pupils individually.

1.47 Counseling.

2.00 Non-instructional Activities with Children

2.01 Explaining school rules to pupils.

2.02 Showing pupils how to clean up and put away materials.

2.03 Checking daily on the health of the pupils.

2.04 Giving first aid to a pupil.

2.05 Operating equipment, such as movie projector, slide projector, tape recorder.

2.06 Supervising pupils.

2.07 Collecting milk money, lunch money, selling tickets, etc.

2.08 Putting on and taking off outdoor clothing (young children).

2.09 Supervising recess time (free play).

2.10 Taking pupils to and from various places in school (such as lunchroom, nurse's office, principal's office, bathroom).

2.11 Collecting milk money and supervising milk period.

2.12 Collecting enrollment fees and workbook money. Sending receipts home.

2.13 Helping chaperone tours, when necessary.

2.14 Keeping attendance.

2.15 Arranging bulletin boards.

2.16 Distributing and collecting lesson materials.

2.17 Doing routine testing, such as administering the Dolch word list.

2.18 Assisting in fire drills.

2.19 Supervising playground before and after school.

3.00 Instructional Activities away from Children

3.01 Getting classroom ready for next day.

3.02 Developing curriculum.

3.03 Determining content and process appropriate to pupil's mastery level.

3.04 Deciding when and how to use media, equipment, supplies, and techniques.

3.05 Visiting other classes and other schools to observe new practices and equipment.

3.06 Keeping up-to-date with educational practices and subject matter, and adopting these innovations where appropriate.

3.07 Conferring with parents.

3.08 Consulting with other teachers and specialists.

4.00 Non-instructional Activities away from Children

4.01 Preparing audio-visual materials, such as charts.

4.02 Preparing bulletin board displays.

4.03 Filing and cataloging materials.

4.04 Duplicating materials.

4.05 Keeping records, such as attendance and health records.

4.06 Checking supplies.

4.07 Collecting milk money, lunch money, selling tickets, etc.

4.08 Checking on temperature, fresh air, and lighting in the classroom.

4.09 Determining, ordering, and cataloging supplies.

4.10 Supervising the maintenance of adequate pupil records.

4.11 Housekeeping tasks within the classroom (library, etc.).

4.12 Keeping records.

4.13 Performing clerical tasks.

Activities of Specialists

The specialist engages in certain activities with children, with other school personnel, and away from either of these groups. The activities are both instructional and non-instructional, except that the specialist has no significant non-instructional responsibility with children. The job description can be described in a five-celled framework (see Figure A-2) for organizing and presenting activities.

Competence in working with children and in providing leadership and service to other school personnel characterizes the specialist. This person may occupy both teaching and specialist roles as a professional team member, or may perform the appropriate tasks from a central-office location.

	Activities directly related to the school program	Activities not directly related to the school program
Activities with children	1.00	2
Activities away from children and instructional personnel	3.00	4.00
Activities with instructional personnel	5.00	6.00

Figure A-2. Organizational framework--activities of specialist.

1.00 Program-Related Activities with Children

1.01 Presenting lessons.

1.02 Organizing groups of children for learning.

1.03 Demonstrating processes relevant to the subject area.

1.04 Communicating positive attitudes toward the subject area.

1.05 Using new and innovative instructional methods.

1.06 Using new and innovative instructional materials.

1.07 Using new and innovative instruction media.

1.08 Introducing special resources and resource persons to children.

1.09 Assisting individuals with instructional problems.

1.10 Diagnosing learning level and prescribing next learning activities.

1.11 Guiding special field trips.

1.12 Evaluation and selection of instructional materials, media, and supplies.

3.00 Program-Related Activities away from Children and Instructional Personnel

3.01 Preparing demonstration lessons.

3.02 Translating content into teaching units or lessons.

3.03 Developing teaching guides and materials.

3.04 Planning presentations for children.

3.05 Planning presentations for instructional personnel.

3.06 Surveying current theory, research, and practice in education and the special area for local application.

3.07 Speaking to lay groups.

3.08 Explaining school program to visitors.

3.09 Communicating with other content specialists.

3.10 Developing evaluative plans and devices.

3.11 Correlating the various school activities with area of specialty.

3.12 Planning meetings, conferences, and observations for instructional personnel.

3.13 Analyzing evaluative data and reporting findings.

4.00 Activities away from Children and Instructional Personnel not directly Related to the School Program

4.01 Ordering materials and supplies.

4.02 Attending professional meetings and conferences.

4.03 Collecting and distributing newsletters, brochures, and announcements.

4.04 Planning and projecting budget needs.

4.05 Providing data to other departments.

4.06 Preparing reports of activities.

5.00 Program-Related Activities with Instructional Personnel

5.01 Demonstrating new instructional methods.

5.02 Demonstrating new instructional materials.

5.03 Demonstrating new instructional media.

5.04 Informing personnel of special resources and resource persons.

5.05 Advising individuals on special instructional problems.

5.06 Conducting regular meetings of instructional personnel.

5.07 Initiating and conducting inservice workshops and orientation sessions for new instructional personnel.

5.08 Conducting curriculum development and evaluation projects.

5.09 Acquainting instructional personnel with the school program at other levels.

5.10 Assisting personnel in instructional improvement.

6.00 Activities with Instructional Personnel not directly Related to the School Program

6.01 Mediating conflict between instructional personnel and administrators.

6.02 Coordinating supply and equipment orders.

6.03 Planning for new physical facilities.

6.04 Interpreting school district policy.

6.05 Interpreting local cultural patterns and values to personnel.

6.06 Assisting personnel in formulating and carrying out career development plans.

APPENDIX B

EDUCATIONAL VIEWPOINT OF GEM

Georgia Educational Models believes that the overall purpose of education is to change behavior by nuturing human potential toward the achievement of maximum personal adequacy. Within this frame of reference, we believe that a comprehensive program for the elementary school should be based on two assumptions. One is that the conditions of society should influence what behaviors the school should attempt to develop and the other is that the program should combine instructional procedures with various insights for dealing with the motivational, emotional, and cognitive characteristics of the teacher and learner. In this viewpoint, an attempt will be made to synthesize the implications gleaned from initial investigations, to present a point of view about the elementary school program, and finally, to indicate those principles that must be considered in the carrying out of a comprehensive program supporting the model program.

Societal Goals for the School

Historically, the elementary school in the United States has reflected the values, hopes, and aspirations of the society that it has served. It has been one of the formal organizations (the other being the church) that society has used to pass on a core of values to promote a way of life in the social order. At the same time, the desire of this society to improve itself and its members has broadened the use made of the school. This relationship between the elementary school and the concerns of society can easily be documented.

From the enactment of legislation in Plymouth Colony in 1671 (recommending that schools teach reading so that children could read the scriptures) to Title I of the Elementary and Secondary Education Act of 1965 (providing for compensatory education), there is a clear pattern of the role assigned to the elementary school. For example, reading the scriptures was a value held by the members of Plymouth Colony, just as compensatory education is today a value held by contemporary America.

GEM's position, then, is that the role of the elementary school is to fulfill the needs of the society it serves, by passing on those values, knowledges, thought processes, and skills necessary to strengthen a way of life in the social order, and at the same time, serve as instruments for the improvement of the society. Since society is able to improve itself only through the actions of its members, the development of the maximum potential of each individual should lead to the subsequent improvement of the society.

Consequently, the goals for the elementary school in the sixties and in the future should result from a range of values that will both perpetuate and improve a diverse social system. These values include:

1. Respect for the worth and dignity of every individual.
2. Faith in man's capacity to make rational decisions.
3. Shared responsibility for the common good.
4. Moral and religious values.
5. Emotional health.
6. Competence, even excellence, for all.
7. Respect for the democratic process.
8. Pluralism.

Acceptance of these values as a basis for deriving goals for the elementary school presumes that the elementary school, then, is concerned with the development of the total organism. This concern is reflected in curricular experiences that provide for the intellectual, social, emotional, and physical growth of the child. The school, however, must not be expected to provide all, or even a majority, of the necessary growth opportunities. It shares this responsibility with other institutions, e.g., the home, the church, and community agencies.

Goals for the elementary school, based on concern for the total organism and reflective of societal values, would then include:

1. Providing the student with the tools of learning necessary to meet his current obligations and for his continued development towards becoming a lifelong learner. Tools include skill in reading, writing, listening, speaking, computation, observation, and the more advanced processes of comprehension, discrimination, application, analysis, synthesis, and evaluation. Tools, also, include the understanding and appreciation of the arts, and the skills necessary to maintain adequate physical and mental health.

2. Assisting the student to understand his social and physical world. A basic knowledge of the social world includes an understanding of the institutions of society, their interrelationships, and their relationship to the individual. It, also, includes an understanding of the make-up of society, its religions, ethnic and racial groups, and the influence culture has on the development of the individual. Basic knowledge of the physical world involves knowing how natural laws and one's environment affect the society and the individual, and how one adapts to his habitat.

3. Developing the foundation for good citizenship. Good citizenship consists of an understanding of the democratic process, respect for each person as an individual, and a respect for the rights of others. Knowledge and understanding of the foundations upon which the society has been built and insights into the evolutionary nature of society provide the student with a grasp of his own role in the society. Good citizenship further implies that the individual will become a contributing member of the society capable of rational thought and action.

4. Developing the basis for effective human relations. An essential function of human relations in the elementary school is to help the growing child to know and to understand himself and to grow in healthy attitudes of self-acceptance. While learning to accept himself, it is equally important that he learn to understand and accept others and to be concerned for their welfare. He must realize that all society is based on interaction with others, and consequently, that society is healthy and productive insofar as the interaction is healthy and productive.

5. Introducing the process of change and its relationship to the individual and the society. Effective change is impossible without both the ability to think and to communicate with others in group situations. In an era of rapid societal change such as we are now experiencing, these skills become particularly crucial. Consequently, the elementary school must help children to study events, to place a value on them, and then to make wise decisions as to their own action in relation to them. They must be able to glean from the past that which is realistic for progress in the future. Thus, they must be equipped with the processes necessary for problem solving, and they must be skilled in the processes of communication and group interaction.

6. Assisting the student in developing a personal value system that will enable him to make rational choices. Man's relationship to other men and to society as a whole is largely determined by the attitudes and values that he holds and the worth he places on them. In this area, the elementary school has the responsibility of helping the child to analyze his environment and from this, to discern those attitudes and values that he can accept to be true because they are conducive to the common good. Essential here are the notions of the worth of man, the value of property, social justice, etc. However, in an era of rapid change, it is particularly important that the child be helped to rationally distinguish what is right, rather than what is said to be right. Thus, it is essential that the child have the skills necessary to be aware of the disparities of human circumstance and the skills necessary to identify and to correct unsatisfactory notions. Only in this way can he develop those attitudes and values that will promote effective citizenship and progress toward the common good.

The Instructional Program

Bloom's Stability and Change in Human Characteristics (1964) supports the belief that intelligence is a developmental characteristic. He hypothesizes that half of all growth in human intelligence takes place between birth and age 4, another 30% occurs between the ages of 4 and 8, and the remaining 20% between 8 and 17. In short, about 80% of the child's intellectual growth occurs before age 8. Thus, significant differences in intelligence could result from the environmental influences to which a child is or is not exposed during his early periods of maximum growth. Hence, the elementary school, viewed by GEM as serving children ages 3 through 12, is particularly crucial to the growth of the child.

Thus, GEM views the learner as an individual whose intelligence and development are modifiable; whose behavior can be changed. In GEM Bulletin 68-4 (1968), it is stated that "...the child reciprocally shapes the behavior of others while others are in the process of shaping him." Consequently, the elementary program must be concerned with the interaction occurring in the learning process.

Participating in this learning process is the teacher, the learner, and learning group. Together they interact to create conditions for learning and for change toward greater personal adequacy. Accordingly, the following seven elements (Bradford, 1961) must be examined in depth when fully exploring the instructional processes related to learning and personal change. Without these considerations, teaching can become dispassionate and without personal meaning. Careful consideration should be given to:

1. What the learner brings to the transaction.

2. What the teacher brings to the transaction.

3. The classroom climate.

4. The interaction process.

5. The conditions necessary for learning and change.

6. The maintenance of change and utilization of learning in the life of the learner.

7. The establishment of the process of continued learning.

The learner. To the classroom situation, the learner necessarily brings certain abilities and certain inabilities. But, in addition, he brings his individual motivational, perceptual, emotional, and attitudinal systems, which largely determine his approach to learning and change. Consequently, in the instructional process attention must be given to such things as the learner's attitude toward learning and change, his perception of himself, his openness to change, his ability to perform in a group, as well as his feeling toward his teacher and his peers.

The teacher. Simultaneously, the teacher also brings to the situation his particular motivational, perceptual, emotional, and attitudinal systems through which he must communicate to his students. Thus, combined with a knowledge of subject and skill in organizing, presenting, and evaluating material, he should bring an understanding of (Bradford, 1961):

1. Teaching as a delicate human transaction requiring skill and sensitivity in human relations.
2. An awareness of his own needs and motivations and their consequences to the learning process.
3. The ability to accept the learner as a person.
4. An understanding of group impact effecting learning and behavior change.

The climate. Assuming that the teacher has task competency, an optimal climate for behavioral change can be tentatively postulated. The conditions necessary would be (Blumberg, 1968):

1. Each of the parties involved need to see that their investment in energy will be compensated for adequately.
2. Each must have an understanding and concern for the other.
3. The communication climate must be supportive and not defensive.

4. The relationship between the teacher and learner must be open and "authentic."

5. An attitude of experimentalism must exist so that the participants are open to new experiences.

The interaction process. Within this climate, then, the interaction process actually takes place. Here, it is essential that the teacher have an understanding of groups in order to utilize them as a powerful factor in the process of behavioral change.

Essentially, the interaction process--the action occurring between teacher and learner and learning group--has two basic purposes (Bradford, 1961):

1. To establish and maintain relationships, which reduce anxieties and defensiveness in the learner, helping him to open up for learning.

2. To bring about learning and change.

The principles of learning. Learning is dependent upon certain conditions. Among them are motivational, perceptual, emotional, and attitudinal systems (previously mentioned). In addition, there are other considerations that should be applied in specific learning situations. The following selected examples have been adapted from Hilgard (1967).

1. The learner should be active, rather than a passive, listener or viewer.

2. There should be some repetition in order to bring enough overlearning to guarantee retention.

3. Reinforcement is important; that is, repetition should be so arranged that desirable or correct responses are rewarded.

4. Practice in varied contexts should be arranged so that generalization and discrimination can occur.

5. Conflicts and frustrations should be recognized and their resolution or accommodation provided for.

6. Learning problems should be so structured and presented that the essential features are open to the inspection of the learner.

7. The organization of knowledge should be an essential concern of the teacher or educational planner.

8. Learning with understanding is more permanent and more transferable than rote learning or learning by formula.

9. Cognitive feedback confirms correct knowledge and corrects faulty learning--the learner tries something provisionally and then accepts or rejects what he does on the basis of its consequences.

10. Goal setting by the learner is important as motivation for learning, and his successes and failures are determiners of how he sets future goals.

11. Divergent thinking, which leads to inventive solutions of problems or to the creation of novel and valued products, should be nurtured along with convergent thinking, which leads to logically correct answers.

12. The learner's abilities are important, and provisions must be made for slower and more rapid learners, as well as for those with specialized abilities.

13. Since postnatal development may be as important as hereditary and congenital determiners of ability and interest, the learner must be understood in terms of the influences that have shaped his development.

The maintenance and application of learning. Education has long recognized the problem of applying and maintaining learning. Because they are so essential, provisions for them must be made during the actualy teaching-learning process. It must, however, be realized that maintenance and application of learning have both emotional and cognitive aspects (Bradford, 1961). The learner must accept that which he knows before he is willing to apply and utilize his knowledge in other situations. Consequently, the learner should be helped: (a) to diagnose forces of both resistance and support for change that exist within himself and his environment, (b) to assess his own strengths and weaknesses which will affect his learning, (c) to plan ways of holding on to this learning independent of the classroom learning situation, and (d) to develop a continuing system of learning based on such things as experimentation and analysis which will help him to learn from a variety of experiences.

In addition, teachers should constantly keep in mind various means of producing behavior change (learning). For instance, Kelman (1961) suggests three types of change:

1. Compliance--Compliance occurs when a person accepts influence from another person or from a group because he hopes to achieve a favorable reaction from the other. He does not adopt the induced behavior because he believes in its content. Rather, he adheres to it because it is instrumental in the production of a satisfying social effect. It is "the thing" to do.

2. Identification--Identification occurs when an individual adopts behavior derived from another person or group. He perceives this behavior to be associated with the goals or objectives of this group. Because he finds this particular relationship to be personally satisfying, he wants to adopt the behavior and to be like the individual or group. Consequently, he tends to behave in such a way as to meet the expectations of the other. Thus, the acceptance of influence through identification usually takes place when the person sees the induced behavior as relevant to and required by a reciprocal role relationship in which he is a participant.

   Identification is similar to compliance in that the individual does not adopt the induced behavior because its content per se is intrinsically satisfying. Identification differs from compliance, however, in that the individual actually believes in the opinions and actions he adopts. Opinions adopted through identification tend to remain tied to the external source and dependent on social support. They are not integrated with the individual's value system, but rather tend to be isolated from the rest of his values.

3. Internalization--Internalization can be said to occur when an individual accepts influence because the induced behavior is congruent with his value system. The characteristics of the influencing agent do play an important role in internalization, but the crucial dimension here is the agent's desire to behave in such a way because he has thought out his value scheme and has found this type of behavior to be congruent with his belief.

> The individual adopts it because he finds it useful for the solution of a problem, or because it is congenial to his own orientation or because it is demanded by his own values--in short, because he perceives it as inherently conducive to the maximization of his values (p. 513).

The establishment of a process for continued learning. Finally, returning to the goals of the elementary school, attention must be given not only to producing behavior changes (learning) in children but also to preparing them both to cope with and produce change themselves. Consequently, they must be equipped with a knowledge of process as well as content in order both to utilize their knowledge effectively and to become lifelong learners.

According to Parker and Rubin (1966), the following are some necessary requisites for the production of change and the continuation of learning:

1. The student should possess a body of knowledge or a memory and information input.

2. He should be able to extract meaning from this body of knowledge.

3. He should be able to affix significance to the knowledge, to determine its usefulness and ways and means of applying it in other situations.

4. He should be able to put this knowledge to functional use; to operate with it in different situations and to manipulate it through intellectual activity.

If, in the teaching-learning situation, these steps are taken into account, perhaps the child can leave the elementary school able, on his own, to solve problems and produce change by: (a) recognizing areas in need of change, (b) clarifying the problem, (c) examining alternative solutions and goals, (d) hypothesizing outcomes, (e) selecting alternatives, (f) evaluating results, and (g) refining the situation.

Instructional Model

The instructional considerations described above indicate the importance of the social-emotional aspects of the learning process. However, in addition, attention must be given to the necessity for developing a systematic plan for instruction. Crucial to this plan is the determination of specific goals and objectives for learning.

Once objectives have been specified, the individuality of the pupil must be considered and his particular learning needs diagnosed.

Only when this diagnosis is complete can individual and group learning experiences be prescribed for the attainment of the objectives. Once they are prescribed, provisions for necessary experiences can be developed in the school program. Finally, a systematic evaluation should be made to determine the degree of mastery by the student as well as the effectiveness of the diagnosis, the prescription, and the learning experiences, Figure B-1 presents a schematic representation of the proposed model.

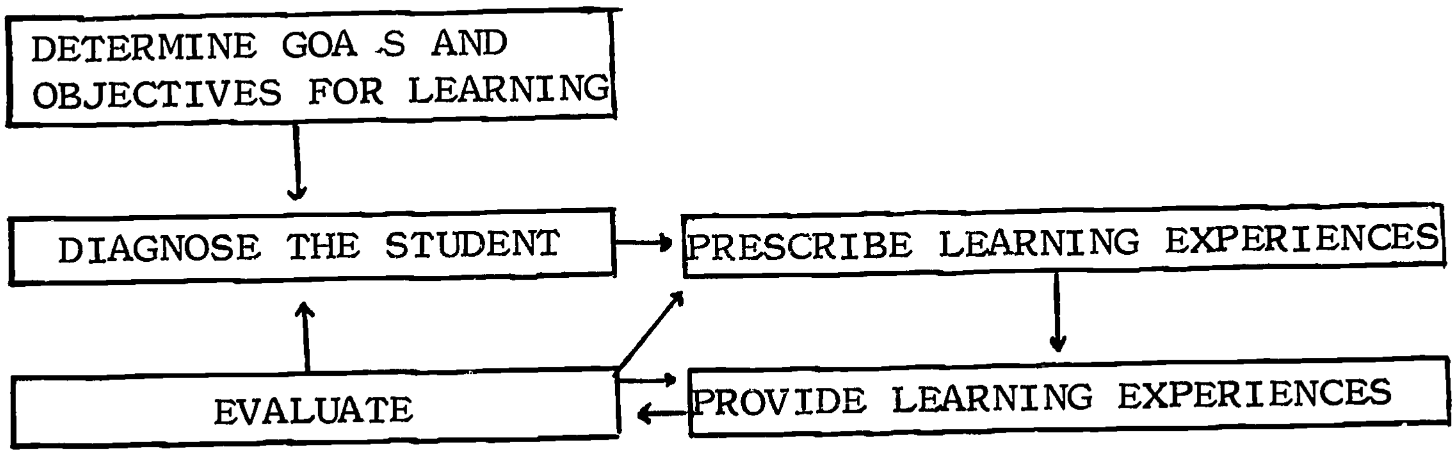

DETERMINE GOALS AND OBJECTIVES FOR LEARNING
DIAGNOSE THE STUDENT
PRESCRIBE LEARNING EXPERIENCES
EVALUATE
PROVIDE LEARNING EXPERIENCES

Figure B-1

Instructional Model

Principles of Operation

GEM believes that there are certain conditions or principles of operation that the elementary school should give attention to in order to bring about the desired behavior changes dictated by the goals and objectives of the elementary school and by the nature of the instructional process as proposed earlier in this paper. These principles have been classified in terms of the instructional program, teaching, learning, and organization. It is the belief of the GEM staff that these principles are also appropriate at the collegiate level and should be given careful consideration in the development of a teacher education program.

Instructional Principles

1. The instructional program provides for continuous intellectual stimulation.

2. Instructional program provides opportunities for learners to engage in independent inquiry.

3. The instructional program reflects individualized instruction so as to account for differentiated learning rates among learners.

4. The instructional program allows opportunities for the use of a variety of instructional approaches as they are needed.

5. The instructional program provides for the continuous evaluation of learner progress.

6. The instructional program provides for the appropriate use of current events.

7. The instructional program is supported by a variety of instructional materials.

8. The instructional program is supported by an adequately stocked learning resource center.

9. The instructional program provides opportunities for social interaction.

10. The instructional program demonstrates principles of democratic living.

11. Instructional programs are continuous, each student progressing at his own rate of learning as determined by estimates of his potential rate.

12. The instructional program requires the learner to operate at his maximum potential yet does not pressure him to the extent that he cannot operate effectively.

13. The instructional program is balanced so that students receive a wide range of experiences that allow them to develop socially, emotionally, physically, and intellectually.

14. The instructional program provides opportunities for students to develop both divergent and convergent thinking.

15. The instructional program makes provisions for students with limited potential as well as those with very high potential.

16. The instructional program reflects social change.

17. The instructional program provides for the active participation of students in the learning process.

18. The instructional program provides for flexible grouping of students based on distinct criteria for particular tasks.

19. The instructional program is planned cooperatively by the staff.

20. The instructional program presents cognitive learnings in such a manner that subject matter and processes are intertwined.

21. The instructional program provides each student with learning activities which challenge him in the direction of the objectives yet which allow him to be successful the majority of the time.

22. The instructional program is continuous, each student progressing at his own rate of learning.

Teaching Principles

1. The instructor is skilled in diagnosing group action.
2. The instructor is skilled in helping learners to perceive their social responsibilities.
3. The teacher is commissioned to continually learn. Last year's teaching is not good enough for this year's children.
4. The instructor is skilled in helping learners examine their own motivations.
5. The instructor is skilled in using diagnostic instruments appropriate to specific learning problems.
6. The instructor understands the teaching-learning process.
7. The instructor is skilled in predicting the consequences of their actions.
8. The instructor is skilled in understanding the social structure of the classroom.
9. The instructor regards each students' developing a positive self-concept as an essential responsibility of the instructional program.
10. The instructor regards every student as a potential asset to society.
11. The instructor respects the uniqueness of each student.
12. The instructor provides students with opportunities to develop an adequate understanding of themselves, their strengths, and their limitations.
13. The instructor sees that students understand the limits for social behavior in the school setting.

14. The instructor understands that students are influenced and shaped by their environment.

15. The instructor provides the opportunity to develop the skills of self-evaluation.

16. The instructor encourages students to reason through to solve their own social problems.

17. The instructor makes each student feel that he is worthwhile to society.

18. The instructor provides students with socially acceptable (in the context of the school) ways to communicate.

19. The instructor is skilled in eliciting responses from students that require the use of various cognitive processes.

20. The instructor is skilled in planning learning activities.

Learning Principles

1. Repetition is important in acquiring skill and guaranteeing retention.

2. Goal setting by the learner is important as motivation.

3. Group atmosphere affects learning.

4. The learner acquires only those experiences which are meaningful to him in his conceptual field.

5. Learning takes place within a social context.

6. Problem solving provides opportunity for meaningful application of learnings.

7. Learning is culturally relative.

8. Learning with understanding will more readily transfer to other situations.

9. The abilities of students have to be considered in any learning situation.

10. How a child learns is important, but why he learns is even more so.

11. Positive reinforcement is usually preferable to negative reinforcement.

12. Evaluation and feedback are essential to confirming correct knowledge and correcting faulty learning.

13. Appropriate motives for one learner may not be appropriate for another.

14. Effective learning is continuous and developmental.

Organizational Principles

1. The vertical and horizontal organization of the school have as their major purpose the support of the instructional program.

2. The curriculum is organized around key concepts, conceptual schemes, and/or observations.

3. Curricula experiences are planned so that they will be sequential, integrated, and continuous.

4. Curriculum is planned but flexible enough to permit the utilization of the learner's experience and his readiness to learn.

5. The physical facilities for instruction are flexible and malleable.

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APPENDIX C

ELEMENTARY SCHOOL OBJECTIVES

1.01 Reading

1.01.01 To perform at 95% proficiency in a systematic sequential program of word identification.

1.01.02 To relate reading content to his own experiences and make appropriate judgments of the content.

1.01.03 To utilize work-study skills in content areas.

1.01.04 To choose to read more frequently and in an increasing variety and quality of materials.

1.01.05 To read silently with efficiency and satisfactory speed.

1.01.06 To locate information, select and evaluate a variety of reference materials, and organize information derived from these sources.

1.01.07 To become familiar with the various literary forms and styles and to develop literary tastes and applications.

1.01.08 To acquire and advance an appreciation of the ways in which reading can enrich life, widen experiences, enhance understanding, advance social and personal development, and develop attitudes associated with good character and citizenship.

1.02 Speaking

1.02.01 To draw upon oneself and one's world for the content of one's speech.

1.02.02 To understand the role of speech and the speaker in the communication process.

1.02.03 To use basic speech elements (pronunciation, inflection, enunciation) appropriately.

1.02.04 To utilize a wide variety of words, word-patterns, gestures, and non-verbal cues in speaking to achieve effectiveness and to elicit listening comprehension.

1.02.05 To identify a central idea or point of view and present information in a logical sequence.

1.02.06 To practice politeness and show tact in group situations enabling others to express different ideas.

1.02.07 To utilize and expand upon the ideas of others when involved in discussion.

1.02.08 To evaluate personal speaking habits to identify aspects where further practice or training are needed.

1.02.09 To show poise and confidence in various speaking situations.

1.02.10 To adapt speaking style and content to suit both the audience and the purpose for speaking and attend to response feedback in modifying speech behavior and content.

1.02.11 To choose appropriate words to convey personal and non-personal feelings.

1.03 Listening

1.03.01 To understand the listener's role in the communication process.

1.03.02 To understand and use basic listening aspects such as hearing, auding, comprehending, and determining a speaker's purpose.

1.03.03 To distinguish different purposes for listening (following directions, getting a general idea, drawing conclusions, increasing enjoyment) and to adapt listening skills in terms of these purposes.

1.03.04 To distinguish between relevant and irrelevant details and between statements of fact and statements of opinion or fantasy.

1.03.05 To organize and synthesize information received from an oral presentation.

1.03.06 To understand the nature of the language.

1.03.07 To evaluate personal listening habits and identify aspects where further practice or training is needed.

1.03.08 To recognize and identify some forms of propaganda, bias, and emotionalism in receiving information from various audio sources.

1.03.09 To evaluate statements received from various audio sources and make inferences or raise questions consistent with the informational content supplied by these sources.

1.03.10 To solve listening problems.

1.03.11 To practice courtesy and attentiveness in listening.

1.03.12 To appreciate various audio forms of artistic expression (e.g., music, plays, poems, and choral readings).

1.04 Composition

1.04.01 To draw upon oneself and one's world for the content of one's writing.

1.04.02 To use in writing a continuously expanding, expressive vocabulary.

1.04.03 To use the appropriate conventions associated with the writing act, spelling, punctuation, etc.

1.04.04 To organize, evaluate, and revise writing.

1.04.05 To use easily and flexibly the structure of the English language (sentence structure, paragraph development, etc.) in the process of writing and revising.

1.04.06 To show independence by solving writing problems using one's own resources.

1.04.07 To accept the responsibility of writing in keeping with one's role in society.

1.04.08 To distinguish between and use different writing forms such as letters, essays, poetry.

1.04.09 To select writing style and form in terms of audience and purpose.

1.04.10 To use language in novel ways to achieve special effects.

1.05 Social Studies

1.05.01 To demonstrate the method of the social scientist in the collection, interpretation, and use of first-hand data (primary sources).

1.05.02 To demonstrate an understanding of historical time (past, present, and future).

1.05.03 To appreciate people with other mores, beliefs, languages, customs, governments, environmental conditions, etc.

1.05.04 To recognize the role of the past in the development of the present and future.

1.05.05 To recognize the relation existing between environmental conditions and human progress.

1.05.06 To recognize the importance of human relations, the interaction of people with people, and nation with nation.

1.05.07 To apply principles of human relations in various group situations, so as to contribute effectively toward both achieving group goals and increasing group satisfaction.

1.05.08 To understand the role of government, political parties, and civic responsibility.

1.05.09 To differentiate basic principles of democracy and identify manifestations of these principles in American society.

1.05.10 To understand and use processes, techniques, and basic skills appropriate to different areas of social studies to solve social problems.

1.05.11 To identify vital relationships between significant social factors and forces and artistic achievements and scientific developments which represent important cultural advances.

1.06 Mathematics

1.06.01 To recognize relationships among natural or social phenomena and mathematical notation, concepts, definitions, and facts in one's environment.

1.06.02 To use basic algorithms.

1.06.03 To use numerical relations.

1.06.04 To use geometrical relations.

1.06.05 To make geometrical constructions and drawings and to use these in one's environment.

1.06.06 To use the processes of measurement.

1.06.07 To use mathematical structures.

1.06.08 To comprehend selected aspects of the nature of mathematics.

1.06.09 To comprehend selected topics in number theory.

1.06.10 To use the idea of ratio.

1.06.11 To make applications of concepts of probability and statistics.

1.06.12 To comprehend the basic concept of limits.

1.06.13 To make logical arguments.

1.07 Science

1.07.01 To understand that: the progress made in technology and science even though the goals of these two fields of human enterprises are different, depends upon the interaction between the activities conducted in both fields.

1.07.02 To understand that: living organisms are adapted, or have modifications, for survival in a particular environment. (Broad conceptual scheme: living organisms are in continuous interaction with one another and with their environment.)

1.07.03 To understand that: the surface of the earth is continually changing. (Broad conceptual scheme: all matter, living and non-living, undergoes some degree of change in time.)

1.07.04 To understand that: living organisms go through a series of stages in their development. (Broad conceptual scheme: all matter, living and non-living, undergoes some degree of change in time.)

1.07.05 To understand that: animals and plants depend on each other in many ways. (Broad conceptual scheme: living organisms are in continuous interaction with one another and with their environment.)

1.07.06 To understand that: man's concept of the solar system has undergone many revisions and modifications.

1.07.07 To distinguish among the senses and relate these distinctions to properties in an object in the environment.

1.07.08 To refine one's observations and present them in terms of some system of symbolism.

1.07.09 To develop a method for expanding one's knowledge or understanding of scientific concepts.

1.08 Health, Physical Education and Safety

1.08.01 To discover and gain understanding that growth and development influences, and is influenced by, the structure and functioning of the individual.

1.08.02 To develop strategies for verifying that growing and developing follow a predictable sequence, yet are unique for each individual.

1.08.03 To know that protection and promotion of health is an individual, community, and international responsibility and to implement this knowledge in everyday life.

1.08.04 To discover that the potential for hazards and accidents exist, whatever the environment, and to develop strategies for reducing that potential in every activity.

1.08.05 To learn and confirm that there are reciprocal relationships involving man, disease, and environment and to develop strategies for utilizing this knowledge toward reduction of diseases.

1.08.06 To develop an understanding that the family serves to perpetuate man and fulfill certain health needs, and to promote optimum utilization of this knowledge.

1.08.07 To establish that personal health practices are affected by a complexity of forces, often conflicting, and to promote the development of individual strategies for personal management of conflicting forces.

1.08.08 To condition and develop the physical systems of the body toward optimum effectiveness.

1.08.09 To gain knowledge of athletic, recreational, and individual physical activities which have both immediate and long-range values to the pupil.

1.08.10 To develop in the pupil a more accurate and positive self-concept in regard to physical activities and abilities.

1.08.11 To help children learn to move skillfully and effectively in sports, recreational activities, and in all active life situations.

1.08.12 To develop accurate understanding of the voluntary and involuntary activity of the body and its capabilities.

1.08.13 To identify the values and perceptions which guide the utilization of health information, products, and services and to promote optimum utilization by each individual.

1.08.14 To clarify the variety of motivations which effect the use of substances that modify mood and behavior.

1.08.15 To identify the physical, social, mental, economic, and cultural factors which determine food selection and eating patterns and to stimulate the most promising selections and patterns for each individual.

1.09 Art

1.09.01 To develop levels of skill in the use of art processes appropriate to one's capacity.

1.09.02 To develop understanding, creativity, and confidence in using a variety of art media to communicate thoughts and feelings.

1.09.03 To stimulate the use of imaginative and inventive approaches to the solution of art problems, and to increase the perceptual power (use of visual and tactile senses) in interpreting observations creatively for artistic expression.

1.09.04 To develop competent creative and appreciative experiences that will stimulate enduring interest, constructive response to the work of others, lifelong enjoyment, and improvement of quality of art as applied to leisure activity.

1.09.05 To develop understanding and insights into the principles and concepts of design, variety of art forms, and the process involved in art.

1.09.06 To develop facility in the appropriate artistic vocabulary necessary to express artistic expression, understanding, and appreciation of art objects, art problems, and art experiences.

1.09.07 To develop an appreciation of art as a universal expression in nature and daily life, but which is expressed in a highly individualized manner, as evidenced in all ages and cultures of all mankind.

1.09.08 To help develop insight into the intentions, styles, characteristics, and cultural backgrounds of artists so that one becomes a discriminatory producer and consumer of art through the development of his personal standards and aesthetic taste.

1.10 Music

1.10.01 To understand music as a tonal art form composed of melodic lines, rhythms, and harmonies.

1.10.02 To understand the scientific construction of music with its formal notational system.

1.10.03 To be aware of the historical development of music, its impact on peoples and lands, its current place in the world, and its relationship to our lives today and tomorrow.

1.10.04 To develop standards for critical listening, participation, and selectivity of our musical fare.

1.10.05 To develop the musical skills in performance in order to understand music more perfectly. In some cases, to carry these skills through life as an avocation, if not a vocation.

1.10.06 To be able to react to musical stimuli, emotionally and physically, as a satisfying experience.

1.10.07 To appreciate the creative aspects of music and to feel free to create music.

1.10.08 To enjoy music to the end that one will desire to continue his musical experiences.

1.10.09 To be able to delineate between the various sounds of the standard orchestral families, specific musical instruments, types of human voices, and/or unorthodox singing and musical instruments.

1.10.10 To develop skills in musical notation.

1.10.11 To provide opportunities for the discovery and the growth of musical talent.

1.11 Media

1.11.01 To use appropriately all resource materials and equipment available.

1.11.02 To feel comfortable in the media center atmosphere.

1.11.03 To recognize that the media can help one attain his own learning goals.

1.11.04 To recognize the role of media in the communication process, both for information and pleasure.

1.12 Affective

1.12.01 To understand and value oneself and others.

1.12.02 To communicate oneself.

1.12.03 To understand and value one's non-person world.

1.12.04 To understand and value the process of social interaction.

1.12.05 To interact effectively with others and with one's non-person world.

1.13 Cognitive Processes

1.13.01 To develop self-expression through various forms and media.

1.13.02 To understand one's relationship with others.

1.13.03 To investigate unsolved situations in imaginative and inventive ways so as to resolve problems (creativity).

1.13.04 To discover new relationships.

1.13.05 To solve problems.

1.13.06 To apply principles to specific cases (specifications).

1.13.07 To predict results of change.

1.13.08 To exchange information with the environment.

1.13.09 To understand relationships among environmental objects.

1.13.10 To measure items in the environment.

1.13.11 To classify items in the environment.

1.13.12 To observe the environment.

APPENDIX D

BULLETINS PREPARED BY GEORGIA EDUCATIONAL MODELS

The following is a list of bulletins which were prepared as working papers and are regarded as an integral part of the project's operations preparatory to the development of final report entitled, GEORGIA EDUCATIONAL MODEL SPECIFICATIONS FOR THE PREPARATION OF ELEMENTARY TEACHERS.

GEM Bulletin 68-1	Overview of the Georgia Plan for Developing Specifications for a Model Program for the Preparation of Elementary Teachers. June, 1968. Pp. 27.
GEM Bulletin 68-2	The Role of Society in Formulating an Educational Viewpoint. June, 1968. Pp. 28.
GEM Bulletin 68-3	The Nature of the Educative Process. July, 1968. Pp. 8.
GEM Bulletin 68-4	The Nature of the Child. June, 1968. Pp. 39.
GEM Bulletin 68-5	An Educational Viewpoint for a Comprehensive Program for the Elementary Schools--GEM's Position. August, 1968. Pp. 21.
GEM Bulletin 68-6	The Nature of Elementary School Personnel. June, 1968. Pp. 16.
GEM Bulletin 68-7	The Survey of Technology. June, 1968. Pp. 30.
GEM Bulletin 68-8	Materials for Instruction. June, 1968. Pp. 15.

List of Bulletins Prepared by Georgia Educational Models (Con't.)

GEM Bulletin 68-9	*Organizational Patterns and Facilities for Elementary Schools*. June, 1968. Pp. 20.
GEM Bulletin 68-10	*The Nature of the Culturally Disadvantaged Child*. September, 1968. Pp. 44.
GEM Bulletin 68-11	*Cognitive Processes and Styles*. June, 1968. Pp. 12.
GEM Bulletin 68-12	*In-service Education Program*. September, 1968. Pp. 12.
GEM Bulletin 68-13	*Specification Worksheets for Elementary School Instructional Program*. August, 1968. Pp. 31.
GEM Bulletin 68-14	*Specification Worksheets for Elementary School Learning Program*. August, 1968. Pp. 16.
GEM Bulletin 68-15	*Specification Worksheets for Principles of Organization*. August, 1968. Pp. 8.
GEM Bulletin 68-16	*Specification Worksheets for Teaching Principles*. August, 1968. Pp. 24.
GEM Bulletin 68-17	*Specification Worksheets for Elementary School Affective Program*. August, 1968. Pp. 18.
GEM Bulletin 68-18	*Specification Worksheets for Elementary School Art Education*. August, 1968. Pp. 8.

List of Bulletins Prepared by Georgia Educational Models (Con't.)

GEM Bulletin 68-19	Specification Worksheets for Elementary Cognitive Processes Program. August, 1968. Pp. 12.
GEM Bulletin 68-20	Specification Worksheets for Elementary School Health, Physical Education, and Safety Program. August, 1968. Pp. 20.
GEM Bulletin 68-21	Specification Worksheets for Elementary School Language Arts--Composition Program. August, 1968. Pp. 17.
GEM Bulletin 68-22	Specification Worksheets for Elementary School Language Arts--Listening Program. August, 1968. Pp. 14.
GEM Bulletin 68-23	Specification Worksheets for Elementary School Language Arts--Speaking Program. August, 1968. Pp. 15.
GEM Bulletin 68-24	Specification Worksheets for Elementary School Math Education Program. August, 1968. Pp. 15.
GEM Bulletin 68-25	Specification Worksheets for Media Center. August, 1968. Pp. 7.
GEM Bulletin 68-26	Specification Worksheets for Elementary School Music Education. August, 1968. Pp. 11.
GEM Bulletin 68-27	Specification Worksheets for Elementary School Reading Program. August, 1968, Pp. 14.

List of Bulletins Prepared by Georgia Educational Models (Con't.)

GEM Bulletin 68-28	Specification Worksheets for Elementary School Science Program. August, 1968. Pp. 9.
GEM Bulletin 68-29	Specification Worksheets for Elementary School Social Studies Program. August, 1968. Pp. 20.
GEM Bulletin 68-30	Specifications for the Organization and Administration of Units Essential for Implementation of the Georgia Educational Models (Instructional Program). September, 1968. Pp. 10.
GEM Bulletin 68-31	Specifications for Proficiency Modules for the Georgia Educational Model for Teacher Education--Elementary. September, 1968. Pp. 9.
GEM Bulletin 68-32	Program Sequence Specifications for the Georgia Educational Model for Teacher Education--Elementary. September, 1968. Pp. 6.
GEM Bulletin 68-33	Some Questions and Answers About Project GEM. May, 1968. Pp. 4.
GEM Bulletin 68-34	A Summary Report of the Advisory Board Conference of the Georgia Educational Models Project. September, 1968. Pp. 8.
GEM Bulletin 68-35	Specifications for an Information Wall for Elementary Schools. September, 1968. Pp. 8.