This detailed syllabus for a one-semester course entitled Learning and Teaching
in Senior High Schools given in conjunction with student teaching presents objectives
of the course (including the integration of principles of educational psychology and
teaching into the student's experiences in apprentice teaching; assistance to the
student in adapting to the policies and practices of his assigned school and in
learning to apply alternative policies and innovations; and the development of skills in
performing duties as a teacher) and its organization (including the use of a team
approach with an educational psychologist, subject-matter specialists, and
cooperating teachers; and the utilization of the six hours per week of university
study). Organized on the basis of spiral development, the syllabus has two parts
which are subdivided into units of purpose and further divided into detailed methods,
readings, and activities. Part 1, consisting of six units to be given in 16 hours,
emphasizes the orientation of the apprentice teacher to his school environment, the
teaching skills and curricular materials needed for the early part of the term, and a
brief overview of methods and materials; Part 2, organized into 10 units to be given
during the remainder of the semester, presents a sustained treatment of the
principles of learning and relates them to the teaching of the respective
subject-matter specialties of the apprentice teacher. (SM)

FORDHAM UNIVERSITY
SCHOOL OF EDUCATION
New York, N.Y.

LEARNING AND TEACHING

Secondary School

Syllabus for Education 138.13 (One Semester Course)
Learning and Teaching in Senior High Schools

Introductory Considerations
Underlying Assumptions

1. A team approach in which a generalist in educational psychology, a
subject matter specialist, the cooperating teachers, and if possible
the departmental chairmen of the cooperating teachers, will be used
in each college section of the course. The college instructors will
visit one another's classes, will meet regularly, and will visit the
schools in which their apprentice teachers will serve.

2. The cooperating teachers will be selected with care.

3. Prior study of the development of urban youth will have been provided
in the course titled "Urban Youth" and this study will be further
applied in the appropriate situations.

4. Throughout the course, the underlying principles of educational
psychology will be correlated with the principles and practices of
teaching the particular subject area in high schools (methods and
materials) and these in turn will be integrated to the optimum degree
with the students' experiences in apprentice teaching.

5. The course will aim to help the apprentice teacher to adapt himself to
the policies and practices prevailing in the school to which he is
assigned (in part to dispel the fears and uncertainties of working
under rather difficult conditions, if they do exist) and to learn to
apply alternative policies and procedures, including innovative ones.

6. The six hours per week of university study will be divided approxi-
mately into two hours in principles of educational psychology, two
hours in methods and materials in the subject specialty, and two hours
in discussion of guidance of the students' experiences in apprentice
teaching. Provision will be made for large group and small group
organization of the study in the university.

7. In the course of the term, the apprentice teacher will be given
adequate opportunity to observe the performance of all the major
duties of the beginning teacher in his subject area and to develop
some skill in performing these duties himself.

Organization of the Syllabus

The syllabus is organized on the basis of a spiral development. The
first part emphasizes (a) the orientation of the apprentice teacher to his
school environment, (b) the teaching skills, curricular materials, and skills

in the perforr nce of non-teaching services that he will need to learn in their elementary aspects in order to get under way during the early part of the term, and (c) a brief overview of methods and materials. Part one consists of six units to be given in approximately 16 hours.

Part Two presents a sustained treatment of the principles of learning and relates them to the teaching of the respective subject matter specialties of the apprentice teachers. It is organized into ten units to be given during the remainder of the semester.

The spiral development of the syllabus also implies that lea ..ing and teaching will be considered in their simpler aspects in early units and in their deeper or subtler aspects in later units; e.g., motivation as an element in a lesson, motivation as a spur to further learning, motivation (or the lack of it) in the self-image of many ghetto-dwelling Negroes, and motivation in the establishment of remote goals.

Part I - Unit 1   Establishing Positive Procedures in Class Management
at the Beginning of the Term

1.1   Orientation of the apprentice teacher to school setting, facilities, routines.

1.2   Observing how the cooperating teacher establishes routines and begins pupil accounting for his homeroom (official class), and helping him as requested.

1.3   Observing how the cooperating teacher prepares for his subject classes during the first week and how he establishes routines in class management, and helping him as requested.

2.   Readings - Suggested reading for all Units in Part I:

2.1 "Getting Started in the Secondary School" (Manual for New Teachers). Board of Education, City of New York.
2.2 Appropriate sections of texts on the principles and practices of teaching in secondary schools; e.g.,
2.2.1 Batchelder et Al: "Student Teaching in Secondary Schools", McGraw-Hill, 1964 (4th edition)
2.2.2 Grambs, Jean D. et Al: "Modern Methods in Secondary Education", Dryden Press, 1958.
2.2.3 Hansen, Kenneth H.: "High School Teaching", Prentice-Hall, 1957

2.2.4 Rivlin, Harry N.: "Teaching Adolescents in Secondary Schools", Appleton-Century-Crofts, 1961.

2.2.5 A text on principles and practices of teaching the particular subject area of the members of the class (to be selected by the instructor).

2.2.6 The syllabus and basic materials of instruction used in the subject department in the school in which the apprentice teacher serves.

2.2.7 Bennie, William A.: "Cooperation for Better Student Teaching", Burgess, 1966.

2.2.8 Callahan, Sterling G.: "Successful Teaching in Secondary Schools", Scott Foresman, 1966.

3. Activities

3.1 Formulation of the functions of the homeroom class in a high school.

3.2 Examination of typical records and reports maintained by the homeroom teacher and of the purposes served by each.

3.3 Rationalization of selected routine procedures and records in class management established at the beginning of the term.

3.4 Comparison of procedures to be routinized and those not to be routinized.

3.5 Comparison of routine procedures used in different schools and different departments.

3.6 After being assigned and appropriately introduced to his (her) school, each apprentice teacher should find out all he can about

3.6.1 the school, including its exact location, the location of "his" department's classrooms, special facilities, equipment and supplies;

3.6.2 the administrative organization of the school from the principal to the custodian;

3.6.3 the special services offered by the school such as the library, audio-visual center, the guidance services, and the relation of the services to other community agencies.

3.7 Each apprentice should have conversations with the principal, administrative assistants, the chairman of his department, and as many teachers as he can as soon as possible. Visiting the teachers' lounge, and eating with the school's staff are excellent ways of getting acquainted and getting to feel a part of the faculty.

3.8 From the beginning of his assignment each apprentice teacher should be advised to begin recording his observations at the school. Each should be sensitized to observe such categories as the

3.8.1 teacher's personal attributes

3.8.2 teacher's methods of conducting lessons

3.8.3 teacher's handling of classroom routines

3.8.4 teacher's interactions with pupils

3.8.5 teacher's use of various instructional media in the classroom

Part I - Unit 2   Developing Efficient Class Management and Constructive
                   Class Discipline after the Term Gets under Way

1.1   Pupil-participation in class management
1.2   Critical transitional points in period requiring smooth
      management procedures
1.3   Maintaining records and reports
1.4   Relationship of good management to good teaching and learning
      (and the converse)
1.5   Meaning of constructive class discipline and conditions conducive
      to its establishment
1.6   Relationship of good discipline to good teaching and learning (and
      the converse)
1.7   Handling specific types of group infraction and specific types of
      individual infraction. Discipline as an aspect of guidance.
1.8   Initial consideration of the interrelationships between educational
      psychology and the practices in the above areas.

2.   Readings - No additions

3.   Activities

      3.1 Developing initial skills in observing how the cooperating
           teacher (a) handles class management and class discipline
           and in observing the similarities and differences in pupil
           reaction, the teacher's attitudes and procedures in these
           areas.
      3.2 Considering illustrations and problems presented by the
           members of the class.

Part I - Unit 3   Knowing Your Pupils

1.1   Review of socio-economic composition of the high schools of New
      York City
1.2   Identifying similarities and differences among secondary school
      pupils (abilities, achievements, personalities, etc.).
1.3   Using cumulative school records of the individual student, with
      due attention to their usefulness and limitations.
1.4   Observing how teachers provide for individual differences in
      varying situations.

2.   Readings - No additions

3.   Activities
      3.1 Study of the available class profile of a given subject class
           or of the cumulative record card or envelope of a given student
           in the subject classes of the cooperating teacher or of his

homeroom class, and justification of whatever fair inferences
may be drawn from the data
   3.2 Citing illustrations of item 1.4 and tentatively appraising
       the effectiveness of the teacher's efforts to capitalize the
       individual differences even at this early stage in the term.

Part I - Unit 4   Learning to Prepare a Plan for One Lesson and To Teach It

1.1 Purpose of daily lesson planning
1.2 Component parts of a typical developmental lesson on the high school
    level (introductory consideration of each element)
1.3 Indispensable items in the written lesson plan
1.4 Importance of teacher's mastery of the content of the lesson and
    of his readiness to perform effectively (e.g., oral interpretation
    of the poem to be taught or demonstration of skill in the performance
    of an "experiment")
1.5 Adhering to the plan and varying from it: The novice and the
    experienced teacher
1.6 Securing a balance between the excessively structured lesson
    and the drifting lesson
1.7 Introduction to the principles of learning underlying the above

2. Readings - No additions

3. Activities
    3.1 Reports by apprentice teachers of effective lessons given
        by the respective cooperating teachers analyzed into their
        component parts (for identification purposes) and synthesized
        each in terms of the development of its unifying theme or
        mood or other aim.
    3.2 Viewing of a well-developed video-taped lesson and treating
        it as in 3.1
    3.3 Composition by members of the class of plans for actual
        lessons to be given in the high school and class consideration
        of suggestions for improvement.
    3.4 Viewing a poorly developed video-taped lesson and locating
        the points at which learning broke down.
    3.5 Comparison of forms of lesson plans used in various high
        schools to note common and diverse elements.

Part I - Unit 5   Overview of the Most Commonly Used Teaching Techniques

1.1 The art of questioning
1.2 Conducting a classroom discussion
1.3 Employing effectively the audio-visual aids used most commonly by
    good beginning teachers (chalkboards, pictures, slides, films, models,

record players, tape recorders, maps, charts)
Basic procedures in using these aids.
1.4   The demonstration-discussion lesson
1.5   Introduction to the principles of learning underlying the above.

2.   Readings - No additions

3.   Activities
    3.1   Composing three pivotal questions to constitute the framework
        for a lesson plan on a given topic
    3.2   Correcting common errors of novices in the wording of questions
    3.3   Analyzing a video-taped lesson for one or more of the following
        purposes:
        To note how pivotal or key questions and the answers thereto
        were used for moving the lesson toward the desired goal.
        To note the teacher's skill in securing and building on
        sustained answers
        To note and correct common errors in the handling of answers
    3.4   Demonstrating the skillful use and organization of the chalk-
        boards in the various parts of a lesson.
    3.5   Teaching by a member of the class of a lesson in the subject
        specialty on the level of maturity of college seniors by use
        of visual or auditory aids: Were basic procedures used
        effectively? What modifications would be needed with a high
        school class?
    3.6   Conducting by a member of the class of a short discussion on
        an appropriate topic in the subject specialty on the level of
        maturity of college seniors:
        Were basic procedures used effectively?
        What modifications would be needed with a high school class?

Part I - Unit 6   The Curriculum in An Urban Setting

1.1   Definition of the secondary school curriculum in terms of a vehicle
    for achieving the goals of the school.
1.2   Analysis of various curriculum patterns in schools serving specific
    functions.
1.3   Relating the prescribed curricular offerings (by state and/or city
    and school) to the problems of meeting the needs of youth in urban
    settings.
1.4   Identifying the radical curricular modifications and changes taking
    place in secondary schools with some attention to causes.
1.5   Understanding that curricular offerings are means for achieving ends
    and not ends themselves.
1.6   Noting the major structural components of the specific curriculum
    areas. These components can best be understood by identifying the
    major unifying themes, the principal methods or paths of development

and investigation, and by understanding some of the limitations
as well as the strengths and contributions of the several subject
disciplines.

2. Readings: The various curriculum bulletins in the several subject
              fields at the state, city, and national levels.

3. Activities:
    3.1 Each apprentice teacher should make a careful analysis of
        the prescribed curricular offerings for his field. In such
        an analysis he should determine requirements of the state,
        city and the specific school for understanding differences
        and similarities.
    3.2 Each apprentice teacher should make a study of the "structure"
        of his special discipline or disciplines with especial attention
        to the major unifying themes.
    3.3 Each apprentice teacher should identify structural changes in
        his discipline over the years. Teachers must understand that
        while an understanding of "structure" enhances the process of
        conceptualization and cognitive learning, the structure itself
        is not immutable, e.g., discovery that the "flat" earth was
        "round", or that "matter and energy are essentially equivalent"
        as per Einstein.

Part II -   Introductory Considerations

1. Each of the ten units is organized as follows:
    1.1 The principles of learning underlying the unit and several
        applications of these principles are set forth in summary terms.
    1.2 The correlated principles and practices of teaching are stated
        or briefly described, unless they are given or clearly implied
        in 1.1
        The specific applications of the principles referred to above
        to the teaching of the respective subject specialties and the
        treatment of the materials of instruction in the specialties
        are left to the subject specialists.
    1.3 Some activities of members of the class (large group or small
        group) are suggested.
    1.4 Reading assignments and, in some cases, other types of inde-
        pendent work are stated in general terms, the specifics being
        left to the individual instructor.

2. Part II begins with the general reading list and describes the units.
    The appendices contain lists of films, further references, and a set
    of supplementary observations.

General Reading List

It is suggested that the student be required to purchase one textbook in educational psychology of which the following are typical and currently popular:

Cronbach, Lee. Educational Psychology. (2nd ed.) New York: Harcourt, Brace and World, 1963.

Klausmeier, H. J. & Goodman, W. Learning and Human Abilities. (2nd ed). New York: Harper & Row, 1961.

McDonald, Fred. Educational Psychology. (2nd ed). Belmont, Calif.: Wadsworth, 1965.

In addition the following paperbacks would be worthwhile during the course of study and as references later on:

Mager, R. F. Preparing Objectives for Programmed Instruction. San Francisco: Fearon, 1961. (also a later edition called Preparing Instructional Objectives, 1964). A programmed textbook, it is a very handy one for learning how to state classroom objectives in behavioral terms.

Green, D. R. Educational Psychology. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964. This gets down to the core of school learning; for example, one chapter (Chapter 3) is called Schools, School Teachers and School Subjects. Each section is illustrated with examples from classroom teaching. A must!

Woodruff, A. D. Basic Concepts in Teaching. San Francisco: Chandler, 1961. It gives the prospective teacher a workable set of ideas of what a teacher does when he teaches a class. This is the work of an educational psychologist working with school faculty members. It specifies step-by-step what the teacher does when teaching (e.g., teaching a concept) and parallels this to what the learner is doing. It includes many very practical teaching requirements; e.g., steps in carrying on a discussion, steps in using role playing (and why role playing is used), steps in developing concepts or principles, and how to conduct buzz sessions. It is a "cook-book" but every "recipe" is nicely tied to the philosophy of the school and to psychological principles.

Carpenter, F. & Haddan, E.E. Systematic Application of Psychology to Education. New York: Macmillan, 1964. This book is just what the title says. It develops learning principles in conjunction with the teaching processes. This book is suggested specifically for the chapters on analysis of the lecture; the group discussion, the motion picture, the field trips, and automated devices and programmed materials. It is very much a "how-to-do-it" book.

Sarason, S. B., Davison, K., & Blatt, B. The Preparation of Teachers: An Unstudied Problem in Education. New York: Wiley, 1962. It is probably more for the teacher of teachers than for the student-teacher. Nevertheless, there is much of value in this book for the student teacher on such topics as a detailed account of what a teacher (in the elementary school) does in the course of a classroom day, and the importance of the teacher as an observer.

Tyler, L. E. Tests and Measurements. Englewood Cliffs, N.J. Prentice-Hall, 1963. It contains just about all that the beginning teacher should

know about tests and measurements. It would overlap the chapters in the typical educational psychology textbook, however.

Bloom, B. S. et. al. <u>Compensatory Education for Cultural Deprivation.</u> New York: Holt, 1965. An excellent book, it describes the issues and objectives of compensatory education. It contains annotated bibliography of studies related to compensatory education.

Bruner, J. S. <u>The Process of Education</u>. Cambridge: Harvard University Press, 1961. It takes a critical look at education, with suggestions for improvement. It should be recognized as being only one view and can be a good basis for discussion.

Part II - Unit I Understanding the Learning-Teaching Process

Applied Principles of Learning

1. The teacher must be able to understand the purposes, fundamental principles and methodology of the study of learning in order to relate learning principles (what the pupil does) to teaching processes (what the teacher does).

   1.1 Distinguishing behavior as performing or reacting from learning as a change in behavior.

   1.2 Learning to state behavioral objectives (what the student does in given situations).

   1.3 Analyzing the learning process into its elements. (e.g., readiness, motivation, situation, interpretation of situation by the student: directing the interpretation to an end to be achieved; evaluating the validity of the interpretation in terms of the goal <u>or</u> other acceptable interpretation).

   1.4 Analyzing the teaching counterparts of the learning process (e.g., teacher diagnoses the differences in pupils; teacher provides for motivation; teacher sets the situation; pupils and teacher work out objectives; content provides interpretation; teacher evaluates).

2. Readings

   2.1 Mager, R. F. <u>Preparing Instructional Objectives</u>. San Francisco: Fearon, 1961. (Entire book)

   2.2 Green, D. R. <u>Op</u>. <u>cit</u>. Ch. 3 and 5.

3. Activities

   3.1 Professor and student teacher observe a film of a classroom in action. Each records what he observes. Discussion directed toward differences in perception between naive and sophisticated observer. Show how biases may influence perception; e.g., what

the observer would see if he viewed the film from the point of view of a) a reinforcement theorist; b) a phenomenologist; c) a cognitive theorist; d) an interaction analyst; e) a developmental psychologist; etc.

3.2 Prepare several behavioral objectives to represent a course of study in the student-teacher's area of interest. Emphasis should be on writing good behavioral objectives, rather than on describing the entire course. Perhaps students in each methods section can be assigned different parts of their course so that a "package" of behavioral objectives can be made available to the entire group.

Correlated Principles and Practice of Teaching
(In addition to those expressed or clearly implied above)

1.1 The teacher should understand the purposes of education in our democracy, if only in their elementary aspects at first

    1.1.1 Exploration of the formulation of these goals by the Educational Policies Commission of the N.E.A., which is stated in behavioral terms, or of any other comparable formulation.

1.2 The teacher should understand how some formulation of the goals of secondary education (stated in behavioral terms) fits into 1 above; e.g., Will French and Associates: "Behavioral Goals of General Education in High School" (limited to the general education aspects of secondary education)

1.3 The teacher should understand, if only through overview at first, how his subject specialty can contribute in behavioral terms to the realization of the goals of secondary education.

1.4 The teacher should be able to analyze in behavioral terms the objectives of the course of study of each grade in his specialty which he will teach.

1.5 The teacher should understand that all of the above principles should constitute the continuing and controlling frame of references for all of his planning and other activities.

2. Readings: See 1.1, 1.2, 1.4

3. Activities: See Applied Principles of Learning in this unit, Item 3.2

Part II - Unit 2   Motivating the Pupil

Applied Principles of Learning

1.   The teacher must be able to establish classrooms in which pupils
       are productively task-oriented.

    1.1 Intrinsic motives and their exploitation (achievement motive;
         curiosity; affiliation motive).
    1.2 Reducing the effects of disruptive motives.
    1.3 Distinguishing between the effects of rewards and punishments
         and the effects of success and failure.
    1.4 Helping pupils to maximize the information value provided
         by errors or mistakes.
    1.5 Understanding and employing knowledge about the self-image
         of the pupil and level of aspiration. (The teacher must do
         what he can to eliminate or to minimize the effects of pre-
         viously established constraints from family, social milieu,
         and school upon level of aspiration, self-image, exploration
         and curiosity).
    1.6 Optimal phasing in feedback from the teacher to give the
         rewarding functions back to the learner in the task.
    1.7 Understanding the need for stating by pupil and teacher of
         short-range, intermediate, and long-range goals. The school
         activity must have some value for the pupils. Teachers must
         help pupils work toward remote rewards.
    1.8 Understanding the reward value of different incentives for
         varying groups.
    1.9 Understanding the effects of reinforcement process, need
         reduction, schedules of reinforcement in increasing pupil
         activity, etc.

2.   Readings:

    2.1 Green, Chapter 4.
    2.2 Murray, E. J. Motivation and Emotion. Englewood Cliffs, New
         Jersey: Prentice-Hall, 1964. Chs. 2, 5, 6, 7 and 8.

3.   Activities:

    3.1 Films - e.g., individual motivation and behavior.
    3.2 Learn to observe motivational factors in the classroom.
         Emphasize observation of extent of rewards and punishment
         by teacher and by pupils of individual pupil's behavior.
         Do similarly for evidence of success and failure. What
         effects do these have on the pupil's later behavior? Are
         children from different socio-economic classes treated
         differently? Do they react differently? What provision
         has the teacher made for motivation in introducing the
         lesson? What provision would the apprentice teacher have
         made? Is there evidence of capitalizing on the intrinsic

and social motives?

Correlated Principles and Practice of Teaching
(In addition to those expressed or clearly implied above)

1.1   Thinking of motivation as a reflection of the student's emotional
and intellectual needs, enables the teacher to plan in larger terms
than the single class period.

1.2   The unit of instruction and the individual lessons therein should,
as far as is possible, begin at points of application in the lives
of the pupils.

1.3   There are effective ways of arousing and sustaining interest in
unit topics or themes and in the topics of individual lessons
when the sense of need is remote.

1.4   Both the teacher and the class must understand and accept the
specific objectives and the ultimate purposes of the proposed
learning activities.

    1.4.1 Planning class activities in terms of specific objectives
    1.4.2 Cooperative planning with the class

1.5   In the motivation of the single lesson, there are temporarily
effective ways of arousing curiosity or initial interest and
ways of creating and sustaining interest intrinsic to the activity
or topic.

1.6   By varying his teaching style, the teacher can keep interest
whetted, particularly when and if it lags in the course of a
long unit of work.

2.   Readings: Section on motivation in texts in methods and
materials in the specialty, at the choice of
the individual instructor.

3.   Activities:

    3.1 In preparation for an actual lesson to be given in
high school, each apprentice teacher will formulate
the chief specific objective of the lesson (in be-
havioral terms), how he will lead the class to accept
his aim, how he will "motivate the lesson", and how he
will sustain the motivation throughout the lesson.

    Note: "Unit teaching" is deferred to later sections of
the course.

Part II - Unit 3 Facilitating Transfer and Retention

Applied Principles of Learning

1.1 All learning involves transfer of previous experiences. Previous experiences may hinder (negative transfer), have no effect upon (zero transfer), or facilitate (positive transfer) new learning.

1.2 The teacher should understand the fundamentals of transfer and their effect on educational practice. Early notions of formal discipline led to curricular content that emphasized the development of "mental disciplines" for which the content was only a vehicle to develop such abilities as memory, concentration, will-power, etc. The notion of identical elements, though valid, at first led to curricula that emphasized the specific applications pupils had to make and that was characterized by the "vocational school" approach. It is impractical if not impossible for the school to teach for every specific situation. The identification of the notion that principles transfer led to a more balanced curriculum.

1.3 Facts, skills, attitudes, and methods all transfer to affect new learning. Of particular importance for the teacher is the recognition of nonspecific transfer, cutting across all subject matter areas, known as "learning-how-to-learn" (study habits, reading skills, etc.). It is quite likely that this is the major deficiency of the "culturally deprived" and the most important objective of compensatory education, as well as of all education.

1.4 Although transfer will occur automatically, without direction it may result in negative transfer because of pupil misunderstanding, failure to see applications, etc. Transfer occurs only to the extent that pupils see similarities among situations. To assure that positive transfer occurs, the teacher must have student understand principles thoroughly and must provide opportunity for applying each and every principle, concept, attitude, and skill that is taught. The more varied the applications the better the transfer. Especially important are applications to situations in which urban youth will find themselves later. See Units 4, 5, 6 below (Acquiring Concepts, Changing Attitudes, Developing Skills)

1.5 The teacher should understand similarities and differences between retention and forgetting.

1.6 The teacher should know explanations for forgetting: Retroactive inhibition (forgetting due to interference by activities occurring between learning and the time of testing); proactive inhibition (forgetting due to interference from all activities prior to learning the material to be tested); repression (forgetting of unpleasant ideas); changes in the situation in which material is tested as compared to the situation in which material was originally learned.

1.7 To facilitate transfer and retention, the teacher can
    1.7.1 provide structure in the form of advance organizers prior to teaching a unit - a kind of overview.

1.7.2 provide applications meaningful to the pupil in terms of his prior experience.

1.7.3 provide for "learning-to-learn"; e. g., whatever the teacher does with respect to learning how to write an essay (even though he is a social studies or a science teacher) is bound to have an influence on how the student writes a paper for another course. Teachers must be united in carrying out their responsibilities for teaching transcurricular skills such as reading, good language habits, study habits, writing, etc.

1.7.4 provide for overlearning. One of the most important factors in memory is that the material to be learned is rehearsed, reviewed, drilled, related to earlier learnings, made meaningful, etc. Recall is enhanced when the individual first reads about a topic, then hears a discussion of the topic, then does laboratory exercise on the topic, then reports on the laboratory exercise. Each activity adds one more degree of "over-learning".

1.7.5 provide for distributed practice. The teacher should not attempt to go on to another phase of the topic before the first is thoroughly learned. He should then give some break or rest period between the two (perhaps a second day is needed). He should make certain to review the topic in one way or another fairly soon after initial learning. He should use the spiral development method; i.e., use the material learned throughout your course. He should not think of a unit as something with an "end" and then drop it. A unit has no end, it is only the beginning on which we continually build.

1.7.6 help students plan course schedules so that one course does not interfere with the other. For example, the beginning student with no foreign language facility will experience considerable difficulty if he takes Spanish the first period of the day followed by French the second period. It is best to plan courses that complement each other (that is, do not interfere with each other or do not lead to confusing similarities) or that are totally distinct.

2. Readings:

2.1 Green, on. cit. Review Chapter 4 and read Chapters 1 and 5.

2.2 Mednick, S. A. Learning. Englewood Cliffs, N.J. : Prentice-Hall, 1964. Chapters 6 and 7.

2.3 Carpenter and Haddan. op.cit. Chapters 10-14 inclusive.

2.4 Bruner, J. Process of Education.

3. Activities:

3.1 Observe a classroom and emphasize in your observations the provisions made by the teacher for transfer. Report to the class what provisions might have been made but were not. Did

the teacher relate the material taught to the needs of
urban youth represented in her class? To the problems
of adolescents? To the pupils' vocational goals?

3.2 Discuss in the teaching methods section of the course
how transfer is provided for in the student-teacher's
field. Take specific topics and discuss all ramifications
of each so that student-teacher's grasp the "how-to's" of
transfer. Do not discuss general notions of transfer in
the methods section. However, when making specific appli-
cations be certain underlying principles are designated.

3.3 Observe a class and determine how teacher provides for
principles of retention in assignments, class activities,
and presentation. Are overlapping activities fuzzy or
made distinct? Is the structure of the material being
presented clear? Provision for overview? Overlearning
review? Rehearsal? Relating to pupil's previously
acquired knowledge? etc.

Correlated Principles and Practice of Teaching

1. No additions

2. No additions

3. No additions

Part II - Unit 4   Helping Pupils Acquire Concepts

Applied Principles of Learning

1.1 The teacher should recognize that any concept or body of knowledge
can be represented as
a set of actions to be performed

summary images that "stand for" the subject (e.g.,
the term Magna Carta stands for all characteristics
of constitutionality; ag. = silver; F = force)

symbolic or logical proposition governed by well-defined
laws (See-saw represented by Newton's law of moments).

1.2 The teacher should identify the important concepts to be taught
in his subject-matter field.

1.3 He should know how concepts affect behavior.

1.4 He should know how language affects concept formation: verbal
mediation; differences in language and meaning among different

sub-culture groups (e.g. the "dialectology" of Negro migrants from the rural South).

1.5 He should know the processes involved in concept formation: How pupils organize knowledge; how they learn to perceive; how they learn characteristics associated with symbols; how they learn to discriminate, to form categories, classifications, groups, etc. from their experiences.

1.6 The teacher must make provision for applying concepts in his subject-matter field to appropriate situations in the student's everyday experience.

1.7 The teacher must decide by use of appropriate diagnostic procedures at which levels pupils are operating and the levels at which given pupils are to be taught. Premature symbolization may impair deeper learning.

1.8 The teacher must realize that not everything about a given concept can be learned at once. This means that concepts must be revisited and reported with different emphases.

1.9 The presentation of material in concept formation must consider the complexity of material, the size of steps and the order of presentation.

1.10 The teacher must learn how to utilize cultural patterns in enriching concepts; e.g., capitalizing on the varied background and experiences of the many pupils in his classes; also eliminating distortions and misconceptions due to cultural patterns.

1.11 Specific teaching techniques would include such procedures as the following:

    1.11.1 demonstration: showing pupils what and how to perceive and providing for discrimination.

    1.11.2 comparing and contrasting different and opposing categories of concept (e.g., democracies and monarchies; classifying art objects into representational and abstract; noting similarities and differences between compounds and solutions, etc.).

    1.11.3 relating observations to other things included in the category (What other things do you know about that are compounds? What artists do you know about that tend to paint representational pictures? etc.)

    1.11.4 making certain that the above principles are employed regardless of the concept being taught and techniques being used. For example, if the field trip is to be used to develop a concept, the mere visit to a museum, zoo, etc. is a wasteful procedure unless some provision is made for perceiving, classifying, etc.

Note on readings and activities for Units 4, 5, and 6:

Although these units must necessarily be treated separately, there will be common elements among them, especially with regard to activities. The readings and activities for all these units are set forth below:

2. Readings:
    2.1   Woodruff, A. D. op. cit. Chapter 7 "Planning for teaching
          of concepts", including how to use large and small group
          discussions, lectures, special reports, questions and
          answers; story-telling, and role-playing. Chapter 8
          "Planning for teaching motor skills"
    2.2   Green, D. R. op. cit. Chapter 2 "Students" and Chapter
          6 "The effects of schooling". Both chapters discuss
          attitude formation.

3. Activities: As each unit is presented the apprentice teacher's
                main activities should be as follows:
    3.1   Prepare a lesson plan to teach a lesson in concept-
          formation, skills, or attitude depending on the unit
          being studied. The lesson plan should consider every-
          thing taught in the term thus far. It should have a
          clear behavioral objective; a statement of how motiva-
          tion will be provided for; how the principles of concept
          formation (skills or attitudes) will be considered in the
          presentation of content; what media will be used; where
          they will be used; what provision will be made for reten-
          tion; how the urban setting will be considered; what
          special teaching techniques (group discussion, films,etc.)
          will be employed, etc.
    3.2   The lesson (only 1 period long) will be taught in the high
          school by the student as planned. Another apprentice
          teacher will observe the lesson and provide constructive
          criticism. Problems will be discussed in the college
          class.
    3.3   This plan of activities requires that each apprentice
          teacher prepare three lesson plans in detail and then
          teach from each in his high school classes.
    3.4   It is suggested that each student prepare a different
          lesson for each end-product (concepts, attitudes, and
          skills) so that by sharing these with the methods class
          as a whole, the students will have a set of carefully
          prepared lesson plans with which to begin their teaching
          assignments as appointed teachers.
    3.5   The activities in units 4,5,6 of Part II should augment
          the over view of the curriculum which was done in unit
          6 of Part I.

          Each apprentice should identify the major curriculum
          concepts which will be pertinent to the achievement of
          the aims established for the term.

          For each major concept, a minimum of three behavioral
          objectives should be stated. Emphasis should always
          be on what the student can do once he has achieved
          information or learned a given concept, e.g. the student

identifies, formulates, discriminates, isolates, classifies, demonstrates, illustrates, solves, etc., and not just realizes, understands or knows.

For each behavioral objective the apprentice should list one or more pupil activities which the pupils must perform in order to learn or to reinforce his knowledge of the particular concept. Care should be taken to assure that the activities are realistically related to the experiences and needs of urban youth. After deciding the pupil activities, attention should be given to those activities which are to be performed by the apprentice teacher.

Next, each apprentice should write sample test items of various types to indicate how he would measure the outcomes of the activities he suggested in #3.

In his college class discussions with his supervisor the suggested activities should be analyzed and criticized. There should be discussions and demonstrations of other methods and techniques of teaching-learning, and reinforcing the concepts under consideration.

Each apprentice should write a lesson plan for teaching a single concept in his field. He should design the lesson plan in accordance with the behavioral objectives stated in #2, the pupil activities listed in #3, and the teacher activities listed in #3.

The lesson should be conducted with the class for whom it was designed, preferably under the observation of the college supervisor and the cooperating teacher.

The lesson should be evaluated cooperately by the apprentice, the supervisor, and the cooperating teacher, with due attention to the psychological principles and components of concept formation.

Correlated Principles and Practices of Teaching
(In addition to those expressed or clearly implied above)

1.1 Concepts are frequently learned and taught at the high school level in the lesson pattern commonly denominated (at least in the New York City high schools) as the developmental lesson.

1.2 Central to the planning and conducting of a developmental lesson is the art of questioning, particularly the composition of carefully worded pivotal questions, the skillful treatment of pupils' answers

to assure a clearly conceived line of development, and the encouragement of students to ask thoughtful questions. Through such questioning, discrimination and partial generalizations are expressed (and tested) in remedial summaries and formulation of the concept(s) and its (their) application in the final summary.

1.3 The basic characteristics of good questions may be summarized as follows:

    1.3.1 They challenge thinking and invite solutions

    1.3.2 They are clear and readily understood

    1.3.3 They are intended to elicit the kind or response that will contribute to the progress of the discussion (demonstration, etc.)

    1.3.4 They are arranged in a purposeful order

1.4 There are crude and skillful ways to treat students' answers of various types (no answer-unimportant answer-significant answer-incorrect answer-poorly or incorrectly expressed answer, etc.)

1.5 The teacher's instruction in all types of lessons is enriched by his discovering the questions, individual and common, that concern the students in his classes

2. Reading: The section on the Art of questioning in the texts on teaching in high school and/or in the texts in the teaching of the subject specialty.

3. Activities: Same as those recommended in Applied Principles of Learning

Part II - Unit 5   Developing and Changing Pupil Attitudes

Applied Principles of Learning

1.1 The teacher must recognize the affective (emotional) characteristics of attitudes as different from the cognitive characteristics of concepts; that is, attitudes include prejudices, biases, interests, values, opinions, preferences, etc. Furthermore, all involve a degree of "like-dislike" qualities, of "approach-avoidance" behavior. Teacher must understand that deep-seated feelings of this sort, since they have been experienced, make attitude change difficult.

1.2 Teacher must learn to reinforce existing desirable attitudes, to modify incompletely developed attitudes, to change socially disruptive attitudes, and to help pupils form desirable attitudes where none exist.

1.3 The teacher should identify attitudes that must be taught in his subject matter area.

1.4   The teacher must be aware of the opportunities in an urban setting that favor the development of desirable attitudes toward art, music, science, etc.

1.5   The teacher must be aware of the elements in the urban setting which cause the development of undesirable attitudes, such as prejudices and ungrounded opinions; e.g. political, racial, religious biases.

1.6   The teacher must understand the role of identification and imitation in the development of attitudes.

1.7   The teacher must understand the role of insecurity, frustration of needs, etc. in the development of attitudes.

1.8   Through his efforts to modify attitudes, the teacher should understand the kinds of deep-seated personal qualities that lead to flexibility or to rigidity (e.g. open-mindedness vs. close-mindedness; authoritarian personality; internal vs. external orientations).

1.9   The teacher must understand how urban secondary school teachers' attitudes and personalities indirectly affect the attitudes of pupils.

1.10 The teacher must understand how to make special provisions for effecting attitude change. All teaching techniques must take into consideration:

    1.10.1 The emotional component of attitudes: making a teaching situation pleasant by providing opportunities for pleasant associations and pleasant expressions and avoiding frustrations and insecurity.

    1.10.2 Providing for directed observation. Just visiting an area without guidance, just allowing the student to observe by himself may lead him to see only those things that are in accord with his biases and prejudices. Thus, he does not change; his existing biases are reinforced.

    1.10.3 Providing for realistic models with whom urban children can identify. The teacher should be certain that the identifying figures are important to the pupils.

    1.10.4 Providing group discussion: Are the participants compatible? Does the group come to a decision?

    1.10.5 Providing lectures and talks: Does the speaker appeal to the group? Is he considered one who should know the value of a given attitude?

2.   Readings: See 2 under Unit 4.

3.   Activities: See 2 under Unit 4.
    3.1   See 3 under Unit 4.
    3.2   Each apprentice should identify the major attitudinal attributes which his subject area seeks to enhance or change. A careful listing of typical biases, prejudices, superstitions, stereotypes, and local misconceptions should be compiled to serve as a guide.

For each attitudinal attribute, write at least three
behavioral objectives. Here, emphasis should be placed
on how the pupil acts or reacts in situations evoking
affective responses such as withholding judgment   ex-
pressing appreciation, tolerating a strange point of
view or simply responding or failing to respond in class.

Since changes in attitudes are harder to achieve than
concept formation, the apprentice teacher must be re-
minded emphatically that the procedures and activities
suggested in unit 4 probably will not suffice. Here,
each apprentice teacher should, after careful classroom
examination of this problem, make a listing of situations
and techniques, besides personal contact by teachers, for
achieving the desired attitude change, e.g. role playing,
discussions, movies and other instructional media.

Each apprentice should write a complete lesson plan de-
signed to change pupils' attitudes toward something in
particular, such as a group of persons, places, processes,
or things.

Each apprentice should indicate specifically how he pro-
poses to evaluate the changes he seeks to cause by teach-
ing the lesson.

The lesson should be taught preferably under observation
of the appropriate personnel.

The evaluation should be done cooperatively.

Part II - Unit 5 Correlated Principles and Practices of Teaching

1.1   The development of desirable attitudes must be planned as
      carefully as (and perhaps with deeper insight into the social
      psychology of adolescence than) growth in knowledge and skills.
1.2   The bias of high school students against some subjects or against
      certain aspects of subjects prior to their exposure to these sub-
      jects can be modified or eliminated, not by direct attack, but by
      creating many, varied, and sustained opportunities for satisfying,
      active learning experiences. Illustrative of these biases are girls'
      fear of mathematics, boys' indifference to or dislike of poetry.
1.3   There are effective techniques for the teaching of lessons and

units in appreciation of literature, art, music and the affective and aesthetic aspects of all other subjects, such as pride in good workmanship. Indispensable to all such learning processes are the development of a sense of personal involvement on the part of the pupil and beginning at the level of taste and maturity of the group.

1.4 There are intersting techniques in the conduct of classroom discussion aimed at modifying stereotyping of sub-cultures (at least at the verbal level),at changing attitudes toward contemporary or past groups, at sensing the heroic in common people, etc.

1.5 Teachers sponsoring co-curricular and after-school activities can develop ways of changing attitudes that can be applied in their conduct of the regular curriculum.

2. Readings:

Sections on the development of appreciation and on discussion as a way of learning in texts on principles of teaching in high schools and in texts in methods of teaching the subject specialties..

3. Activities:

See those recommended under Applied Principles of Learning. One of the three lesson plans should be concerned largely with the developing or changing of attitudes.

Part II - Unit 6   Helping Pupils Master and Apply Skills

Applied Principles of Learning

1.1 The teacher should identify skills he must teach in his subject matter area.

1.2 He must plan an operational analysis of the sequence of activities in the performance of the skill.

1.3 He should understand the steps in teaching a skill:

1.3.1 Teacher demonstrates a skill in its entirety to provide some criterion of performance as a model to be achieved by the pupil and against which he can compare his own progress.

1.3.2 The student makes a verbal analysis of his observations of the demonstration.

1.3.3 The teacher demonstrates each part of the skill in isolation from the others.

1.3.4 The student gets an opportunity to make a first attempt at the skill in its entirety.

1.3.5   The teacher monitors practice, provides guidance, provides opportunity to practice parts of the skill that need to be developed further, provides knowledge of progress, and offers opportunities to apply skills.

1.4   The teacher understands the psychological bases that differentiate skilled from unskilled persons in order to better understand how skills are learned:

    1.4.1   How they differentiate cues.

    1.4.2   How they differ in feedback from internal (kinesthetic and proprioceptive) cues and how they differ in correction.

    1.4.3   How they differ in their coordination of movements.

    1.4.4   How they differ in their performance under stress.

1.5   The teacher must understand the similarities and differences between the development of strictly motor and the development of cognitive skills.

1.6   Here are some special procedures that may be helpful. Film-strips and slow motion films help in the analysis of movements. In the development of motor skills, it helps to use procedures that emphasize cues from certain muscular movements rather than cues from visual sense. In typewriting, the cues for speed-typing should come from the "feel" of the fingers, not from looking at the keyboard. Thus, removing the letters from the keyboard make the pupil independent of the visual cues. Similarly, blocking the lower half of the visual field may help in perfecting the foul shot in basketball since it emphasizes muscular cues associated with the foul shot. Good demonstration by skilled performers are helpful. Most essential, however, is providing for practice with frequent monitoring for the correction of mistakes and attention to "good form".

2.   Readings: See 2 under Unit 4.

3.   Activities:

    3.1   See 3 under Unit 4.

    3.2   Each apprentice should identify the major skills in his specialty which will be pertinent to achieving the outcomes stated for the term.

          For each specific skill identified, apprentices should write the behavioral attributes to be sought in the teaching of the respective skills, e.g., the pupils use the card catalog of the library in locating reference material; the pupils handle and use apparatus in safe and proper fashions; or the pupils accurately type a minimum of forty words per minute after a certain period of instruction.

          For some major skills identified in #1, each apprentice teacher should make careful analyses of the proper steps to be followed in acquiring and mastering them. Here

careful attention must be given to the psychological aspects of skill formation, such as effects of demonstrations, mediation, practice, and monitoring.

Each apprentice should plan a lesson, based on activities #1, 2 and 3, for teaching a specific skill in his field.

Opportunity should be provided for the skill-lesson to be taught, preferably under observation by appropriate personnel.

The lesson should be evaluated cooperatively.

Part II - Unit 6   Correlated Principles and Practices of Teaching

1.   No additions.

2.   Readings: See 2 under Unit 4.

3.   Activities: See 3 under Unit 4.

Part II - Unit 7   Enhancing Productive Thinking

Applied Principles of Learning

1.1   The teacher must understand that the reasoning processes are special cases of transfer. Reasoning cuts across all curricula and subject-matter areas.

1.2   Problem-solving includes the integration of acquired knowledge, orientated toward arriving at an answer to a question, in such a manner that the student arrives at a solution unique to him.

1.3   The teacher must distinguish between mere exercises that require only application of a formula and the solution of problems.

1.4   The teacher should compare the advantages, disadvantages, and application of reception methods of teaching with discovery methods.

1.5   The teacher should compare the advantages, disadvantages, and applications of inductive methods with use of deductive methods.

1.6   The teacher should recognize factors that inhibit problem-solving; e.g., set, rigidity, over-motivation, anxiety, and such personality factors as dogmatism.

1.7 The teacher should know how good problem-solvers differ from poor problem-solvers; e.g., good problem-solvers restructure the problem in their own words but poor-problem-solvers give up if they do not understand the question as it stands, etc. See Bloom and Broder: "Problem Solving in College Students".

1.8 The teacher should understand factors that comprise the intellect as they are related to productive thinking. (Guilford's study of "The Three Faces of Intelligence"). He should distinguish between convergent and divergent thinking.

1.9 The teacher should know how creative pupils behave in school, how teachers react to such pupils, and the relationship between creativity and school achievement. (See Jackson and Getzel's study of high-school students).

1.10 Productive thinking and creativity an be encouraged by brain-storming and eliminating the effect of stress and other detrimental factors. Creativity and problem-solving take time. A pupil should not be expected to come up with an original poem in the last five minutes of class. Recognizing the stages of creativity (such as preparation, incubation, testing alternatives, verification) is helpful to the teacher who wishes to encourage creative expression.

1.11 Problem-solving requires exploration of ideas to arrive at novel solutions. Consider the fact that within an urban area there are many subcultural groups. Experiences in some subcultural groups are such that they predispose a pupil to explore with impunity. Other subcultural groups predispose a child not to explore or to consider alternatives; he wants to identify only the correct solution that adults want. The teacher must minimize the ri: s of exploration.

2. Readings:

Aschner, M.J. & Bish, C.E. Productive Thinking in Education. NEA and Carnegie Foundation, 1965. ($3.00) The contents of the chapters in this book are closely related to the objectives described in the syllabus. Each chapter is followed by a brief summary of "implications for teaching". It is suggested that the professor decide which chapters will be required reading by the student. However, it is likely he will choose to have students read all "Implications for Teaching" and Part 4,"Education for Productive Thinking", at the least.

3. Activities:

3.1 The same as for units 4-6 except that the emphasis will be on the use of the discovery method in solving problems.

3.2 By the time this unit is undertaken, it is presumed that the apprentice teacher will have planned for, and taught, lessons specifically for promoting concept formation, attitudinal formation and change, and for acquiring skills. Thus, the apprentice should be ready to plan and teach lessons encompassing more complex procedures for broader

outcomes. They should begin to integrate cognitive, affective, and psychomotor principles into single lessons, emphasizing all the time that procedures for teaching, learning and evaluating in each domain are different although they are all directed toward the singular end of learning (behavior change).

Correlated Principles and Practices of Teaching

1.1 The organization of the content and the methodology of a high school subject or of a section of it into unit teaching makes available richer opportunities than the traditional organization and methodology for enhancing productive thinking of both the problem solving and the creative forms.

1.2 The introduction of unit teaching at this point in the course offers an opportunity to review the principles of learning and of teaching treated thus far, but applied in a more extensive setting than the single lesson. Study of units 8, 9, and 10 that follow will afford the teacher further insight and teaching techniques for use in unit teaching.

1.3 The rather wide-spread adoption of the concept of unit teaching has lent renewed importance to the ability to study, to learn on one's own, and to apply this ability in the social context of work in committees and reporting to the entire group.

1.4 There are effective techniques for creating the atmosphere conducive to creative expression and to self-expression that is creative for the individual though it may be commonplace in quality as compared with external standards.

2. Readings:

   2.1 The section of texts on principles and practices in secondary education on unit teaching and the section of texts in the various specialties on unit teaching in the respective subjects.

   2.2 The section of the above two types of text devoted to the improvement of work and study skills under the broad contemporary concept of study.

3. Activities:

   3.1 Let each member of the class plan a very short unit or subunit of work in his subject field, following the interpretation or adaptation of the concept of unit teaching accepted by the department in which he is studying as an apprentice teacher. Let him prepare a detailed first lesson in the unit or subunit commonly denominated the overview.

   3.2 Let each member of the class select some one specific

study skill needed by one or more members of one of
the high school classes (such as skimming in rapid
reading, locating information in the library, inter-
preting a chart or graph, etc.) and let him guide the
individual or the small group to master the skill for
their purposes.

3.3   Let several members of the class observe several sessions
of a class or co-curricular or after-school group engaged
in creative self-expression in any area, not necessarily
his own specialty, and have them report to the class on
the techniques used by the teachers or sponsors.

Part II - Unit 8 Establishing a Wholesome Classroom Climate

Applied Principles of Learning

1.1   The teacher must understand the mental health of the teacher
and of the pupil as they affect the teacher's ability to es-
tablish learning environments free of emotionally disruptive
conditions (extreme hostility, anxiety, aggression, fear,
withdrawal, etc).

1.2   The teacher can promote the pupils' mental health through an
understanding of personality integration and "coping behavior".

1.3   The teacher should understand the emotional problems exper-
ienced by pupils and the personal-social factors leading to
these problems, especially those factors and conditions that
are peculiar to adolescence and to dwelling in an urban area.

1.4   The teacher should recognize symptoms of deviant behavior,
whether personal or social, that suggest referral to the proper
personnel services. He should know the personnel services
available and what sorts of service each provides. Under no
circumstances is the teacher to attempt remedies of students'
deviant behavior.

1.5   The teacher should understand the dynamics of social relations
within the classroom: leaders and followers; cooperation and
competition; teacher and pupil interaction; pupil and pupil
interactions; the relationships between teacher personality
style and pupils' personality styles; functioning of groups
within class as they influence the general behavior of the
class and the class structure, etc.

1.6   The teacher should understand how discipline problems arise,
how to avoid discipline problems, what to do about unavoidable
discipline problems. He should recognize the early symptoms of
morale problems and the like, for individuals, group or the entire

class, so that remediation measures may be taken before
rigorous disciplinary action is necessary.

2. Readings:

2.1 Woodruff, A. D. Op. Cit. Chs. 11, 12, 13.
2.2 Berkowitz, P. H. & Rothman, E. P. "The Teacher
and the Distrubed Child" in The Distrubed Child.
New York University Press, 1960.
2.3 Patterson, C. H. "The Classroom Teacher and
Emotional Problems of Children", in Understanding
the Child, 1952, Chap. 21, pp. 67-72.

3. Activities:

3.1 As the student-teacher presents a lesson in a high
school class, have another student-teacher observe
him. Is the observed teacher more prone to "punish"
than the "average" teacher? Was he aware of pupils'
emotional problems? Of their difficulties? Of the
leadership patterns in the classroom? Was the class
overly competitive? Cooperative? Was the class
managed in a business-like way? In an overly restrictive
way? Would the teaching style be classified as warm or
impersonal?

3.2 Have the members of the class role-play different teach-
ing styles while other apprentice-teachers role-play
pupils from different socio-economic groups represented
in the city or pupils with different learning styles.
This activity has two purposes: to learn the techniques
of role-playing and to gain insight into pupil behavior.

Part II- Unit 8
                Correlated Principles of Learning

1. No additions.

2. No additions.

3. No additions.

Part II - Unit 9 Providing for Individual Differences

Applied Principles of Learning

1.1   Understanding the basic elements of the use of standardized
       test results enables the teacher to know his class better
       than might otherwise be the case. Especially important is
       that he be taught to interpret the cumulative record and that
       he also recognize the limitations of the information it contains.

1.2   Understanding how teacher observation of classroom performance,
       of the pupil in social situations, of the pupils' personal habits,
       of the pupils' ethnic, social, religious, etc. background can help
       the teacher to know the pupils' capabilities and limitations in
       learning.

1.3   The teacher should know the special methods used by classroom
       teachers in the urban schools for adapting to the instructional
       needs of sub-groups within the class:

       1.3.1   Gifted pupils - enrichment
       1.3.2   Achievement deficiencies - remediation
       1.3.3   Difference in interests - specific activities correlated
                with interests in working on a project.
       1.3.4   Individualizing instruction - programmed textbooks, etc.
       1.3.5   Integration of ideas and relating instruction to other
                parts of the curriculum - team teaching.

1.4   The teacher should understand the grouping process in relation
       to instruction. Keeping the same groups throughout the course
       is ineffective. Some instructional activities require groups
       based on interests; other activities require groups based on
       achievement levels, etc. Groups are never homogeneous. When
       you attempt homogeneous groups on arithmetic achievement, for
       example, there will be wide differences among the pupils with
       respect to social skills, reading, etc. Perhaps the only area
       in which stable groups are justified is in grouping based on
       reading ability.

1.5   The teacher should realize that individual differences are pro-
       vided for in the school at other organizational levels than the
       classrooms, e.g. the whole school system is based on a "grade"
       system determined by pupil age, under the assumption that most
       students at that age have similar needs and require comparable
       methods of instruction. Difference in curricula within the high
       school reflect the different interests of students such as vocation-
       al, business, college. In a real sense the high school is a
       combination of the graded and non-graded plans.

1.6   The teacher should learn how to employ grouping practices, pro-
       grammed learning materials, enrichments, remediation, team teach-
       ing, and other special teaching practices in conjunction with
       regular class work. He should do so smoothly, and with little
       disruption in classroom management by the transition from one
       procedure to the other.

1.7   The teacher should learn where to find and how to employ teaching

aids (textbooks, films, etc) that can be used for special groups of students in his subject matter area.

1.8 Learning to make sophisticated judgments of students for teaming of pupils, for grouping, etc. requires sophisticated observation and continual records of these observations. Anecdotal records, test profiles, case studies of individuals, case studies of the performance of groups, etc. are all helpful.

2. Readings:

2.1 Bush, P and Allen, D. A New Design for High School Education. New York: McGraw-Hill, 1964.

2.2 Worcester, D. A. The Education of Children of Above-Average Mentality. Lincoln, Nebraska: University of Nebraska Press, 1955.

2.3 Gordon, C. W. The Social System of the High School. Glencoe, Illinois: Free Press, 1957.

2.4 Barker, R. G. & Grup, P. V. Big School, Small School: High School Size and Student Behavior. Stanford: Stanford University Press, 1964.

2.5 Coleman, J.S. The Adolescent Subculture. Glencoe, Illinois: Free Press, 1961.

2.6 Clark, K.B. The Dark Ghetto. New York: Harper & Row, 1965.

2.7 Gallagher, J.J. Teaching the Gifted Child. Boston: Allyn and Bacon, 1964.

2.8 Hock, L.E. Classroom Grouping for Effective Learning. Education Leadership, 1961, 18, 420-424.

3. Activities:

3.1 Examine school and area plans for providing for individual differences. Such plans might be those used in Milwaukee, Wisconsin; Newton, Massachusetts; etc. Evaluate the multiple provisions for special groups of students. What provisions are recommended for the culturally deprived? For the gifted? etc. What provisions were recommended that do not exist in the schools you visited or taught in this semester?

3.2 Take a group (2, 3, or 4 students) in your class that are "special" (require remedial help or are typically unmotivated or are far beyond the achievement of the rest of the class). Attempt to teach them as a small group. Select whatever topic you wish or use any valid teaching procedure that you think will be useful. What techniques were successful? Which need improvement?

Correlated Principles of Teaching

1. No additions.

2. No additions.

3. No additions.

Part II - Unit 10 Evaluating Learning and Teaching

Applied Principles of Learning

1.1 The teacher should define evaluation in terms of making
judgments and decisions:
  1.1.1 Understanding the components of evaluation: e.g.,
  observation, recording, comparing, measuring, etc.
  1.1.2 Understanding the basic limitations of various
  evaluation procedures and instruments (objectivity
  and subjectivity).
1.2 The teacher should develop a broad view of evaluation as
a distinct part of the learning-teaching process; e.g. that
evaluations should be made in terms of the objectives of the
secondary school, the specific curricular area or the concepts,
skills, or attitudes being taught.
1.3 He should develop familiarity with the various kinds of evalua-
tion instruments; e.g. standardized tests, inventories, ques-
tionnaires, etc.
1.4 He should acquire understanding about elementary statistical
concepts and procedures; e.g. norms, standards, validity,
reliability, and variance.
1.5 He should learn to construct classroom quizzes and examination
items; e. g. essay, short answer, simple recall, association,
discrimination, etc.
1.6 The teacher must understand the difference between group testing
and individual examination.
1.7 The teacher must understand why certain kinds of evaluation in-
struments are adequate for certain purposes, but useless for others.
1.8 The teacher must understand that evaluations of cognitive, affective,
and psychomotor aspects of learning require different techniques and
procedures; e.g. cognitive processes (knowing) are best demonstrated
(behaviorally) in problem solving (using knowledge); affective
processes (attitudes) are best demonstrated in reacting (or acting)
in situations which evoke attitudinal responses; and skills are
best evaluated through monitoring performance of learners in a
distinct context.

2.   Readings:

2.1   Typer, L.E.   Op. Cit.

2.2   Any of the Psychological Corporation or E. T. S.
       publications.

2.3   Buros, O. K.   Mental Measurements Yearbook. (All
       editions) To be used for reference only, of course.

2.4   State Education Dept., Albany, New York: Improving
       the Classroom Test (a manual for classroom teachers).

3.   Activities:

3.1   Construct a test comprised of multiple-choice and
       essay questions for one of the units you prepared
       earlier or for a unit you are now reading. Admin-
       ister the test to your class. Examine its statistical
       characteristics (difficulty, item discrimination,
       distribution of total scores, etc.). Were you satisfied
       the test was useful? Why or why not? What can you do
       to improve the test? Was it a fair test for all sub-
       groups in your class?

3.2   Select a standardized test in your subject-matter area.
       Read the manual. Read an evaluation of it in Buros
       Mental Measurements Yearbook. Either administer it to
       some students or find their scores, if available, on
       the test from the cumulative record. How does the test
       "measure-up" in actual practice as opposed to the claims
       of the publisher and/or the criticisms of the reviewer?
       Would you use the test again? Why or why not?

3.3   In this unit each apprentice should made a rather compre-
       hensive study of manuals on standardized tests. Specific
       attention should be focused on
           1) the kinds of measuring instruments.
           2) characteristics of measuring instruments.
           3) specific purposes of various measuring instruments.
           4) the appropriate criteria for selecting measuring
               instruments.
           5) strengths and limitations of various instruments.

       Each apprentice teacher should outline specific procedures
       and instruments which he would use in evaluating a given
       unit of work. The outline (or chart) should include (1)
       evaluation procedures, (2) sample test items written by
       apprentice, (3) the specific realm of evaluation (cognitive,
       affective, psychomotor), (4) strengths of procedures or
       items and, (5) weaknesses and limitations of procedures
       or items.

       Each apprentice should be allowed to try some of the test
       items written by him in a class which he has taught rather
       consistently during the term.

       After administering one of his tests, he should score it,

and analyze the results in terms of variance, central tendencies, and item ease or difficulty, etc.

The apprentice teacher's instruments should be evaluated cooperatively by himself, his cooperating teacher, and the college supervisor.

3.4   Suggestions for a term project:
As an independent term project, it is suggested that each apprentice teacher be required to design at least one complete unit of work which encompasses all of the major components of teaching and learning which are considered in the course. This project would be done in conjunction with the special methods and special techniques phase of the college work.

Correlated Principles of Learning

1.   No additions.

2.   No additions.

3.   No additions.

Appendix A

List of Films Available in School of Education, Pennsylvania State University

Television Utilization: Part 1. 30623 -- Television use in education. Preparation of class for viewing a TV education program. Part II 30624 -- Use of TV in elementary-secondary schools.

You're No Good. 30949 -- Dramatization of a high school drop-out; his frustrations and fantasies.

Angry Boy. PCR-2072-Boy is caught stealing in school Sent by understanding teachers to psychological clinic. Boy's emotional problems traced in investi- gating family life. Shows use of psychotherapy.

Appointment With Youth. 371-34 -- Shows preparation of teacher; learns to use new methods and approaches; improves work of "slow" students; guides unruly member of teen-age gang toward good citizenship.

Aspects of Individual Testing. PCR-2099.

Common Fallacies about Group Differences. 150-12

Discipline during Adolescence.

Fidelity of Report. PCR-95

Four Families: Part I.(301-12)-- compares family life in India and France. Part II (301-11) -- Comparison of Japan and Canadian family life.

Helping Teachers to Understand Children: Part I (371-42) -- Institute for Child study at University of Maryland helps faculty set up local child study program (1960).

High Wall. 301.44-1 -- Prejudices as a consequence of economic frustration.

How to Study. (371.3-1) - Learning to Study (371.3-10)

Learning and Behavior. PCR-2103 -- Principle of reinforcement.

The City and its Region. (30345) -- and the Future (30348) -- as Man's Home (30347)

Case History of a Rumor. 30356

Classification of Materials. 20255N - Makes distinction between "channel" and "medium" as they apply to potentials and limitations of A-V materials.

Communications. 30565N - Teacher's role as a communicator.

Creative Imagination -- English. 40025 -- Unrehearsed class session in which teacher leads students to think creatively about a problem -- definition of democratic man.

Creativity - The Project Approach -- English. 30366 -- 12 grade English class. Variety of projects are undertaken by different students.

Current Events Through Instructional Materials -- Geography. 40627 Eighth grade. 1962.

Diagnosing Group Operations. 30530 -- NET. Causes of conflicts in groups

Experiment in Excellence: Parts I and II. 30668--Ways, including new media, teachers provide for individual differences. 1964.

Focus on Behavior:
     A World to Perceive. (30296)
     Computers and Human Behavior (30302)
     Need to Achieve (30395)
     Learning about Learning (30292)
     No Two Alike (30301)

<u>Of Men and Machines</u>   (30293)
<u>The Brain and Behavior</u>   (30390)

<u>Improve Your Study Habits</u>. 10015 -- Good habits in taking notes, learning to use reference books, outlining, and making a homework schedule.

<u>Improving Study Habits</u>. 20235 -- Important skills contributing first steps in the learning process -- careful listening and reading, accurate comprehension and adequate note taking.

<u>Individual Motivation and Behavior</u>.30531 -- Individual motivation and behavior in groups. Why do people join groups, and why do some members block or dominate group action?

<u>Inductive-Deductive Method</u> -- Biology. 30364
<u>Inductive-Deductive Method</u> -- Mathematics. 40020
<u>One Step At a Time</u>. 30672 -- General introduction to teaching machine
                                             concepts.
<u>Problem Solving</u> -- World Affairs. 40018
<u>Reading Improvements</u>   <u>Comprehensive Skills</u>. 10063
                             <u>Defining the Good Reader</u>. 10067
                             <u>Effective Speeds</u>. 10066
                             <u>Vocabulary Skills</u> 10064
                             <u>Word Recognition Skills</u>. 10065

<u>Reading</u> -- <u>The Language Experience Approach</u>. 20219
<u>Review Lesson</u> -- Biology. 40026
<u>Teaching A Concept</u> -- <u>American History</u>. 40021
                          <u>Mathematics</u>. 30367
                          <u>Mathematics</u>. 30365
                          <u>Physics</u>.   40022
<u>Teaching a Mental Skill</u> -- Mathematics. 40023
<u>Teaching of Reading in the Secondary Schools</u>. 40032
<u>Palmour Street</u>. 136.7-58
<u>Quiet One</u>. 136.7-34

<u>Search</u>: <u>Juvenile Delinquency</u>. 364.3-5
          <u>New Hope for Stutterers</u>. 30570N

<u>We Plan Together</u>. PCR-2085 -- Eleventh-grade pupils of Horace Mann-Lincoln School plan cooperatively a core program. A new student tells of his experiences and how they changed his outlook.

Appendix B

<u>Additional References</u>

1.   Any of the following materials, which are free or of low cost, can be obtained by the instructor for distribution to the student teacher.

a. Any of the Psychological Corporation Test Service Bulletins (e.g. Cross-validation; Methods of Expressing Test Scores; The Differential Aptitude Test; etc.)

b. Edgar, R. & Storen, H. Learning to Teach in Difficult Schools (Secondary School). Flushing: Queens College, 1963. Publication #4.

c. Crosby, M. An adventure in human relations. Wilmington Public Schools, 1960.

d. Kornberg, L. Bridges to slum-ghetto children. Queens College, 1962. Publication #3.

e. The school in the city. School Life, June 1963. (Although oriented to elementary seems general enough to be useful to secondary school teachers.

f. Any of the high school publications by the New York Board of Education that are related to the student teacher's subject-matter area.

Other References

Lorenten, J. O. & Umans. Teaching the Disadvantaged. Teachers College Press, 1966.

Gage, N.L. Theories of Learning and Instruction. In Ernest R. Hilgard, (Ed.) 63rd Yearbook, NSSE, Part I, Chicago: University of Chicago Press, 1964. Pp. 268-273.

Bloom, B. S. (Ed.) Taxonomy of Educational Objectives. Handbook I: Cognitive Domain. New York: Longmans, 1956.

Flanders, Ned A. Intent, Action, and Feedback: A preparation for Teaching. Journal of Teacher Education. 1963, p. 260.

Research in Education. The Teacher's College Journal. (Indiana University), Vol. 38, 3, 1966. This issue deals with many problems of teacher education relevant to educational psychology. Some titles of importance are "Educ. Psychol. and Teaching: Opinions of Experienced Teachers." "Clarifying the Supervising Teacher's Role." "Learning under two different conditions." "Helping teachers classify and study teaching." "Behavior." "From rags to rags. Probable effects of poverty upon aspirations."

Appendix C

Supplementary Observations

Teaching method should emphasize different teaching-learning styles. If pupil is a concrete thinker, what is the consequence of using abstract-concrete (deductive) method? If the learner in urban areas comes from an environment in which discipline comes from figures outside of home should school set and enforce rules to maintain discipline - at the same time maintaining verbal and physical expression through opportunities for role-playing, etc.? Pupils (whether disadvantaged or not) do not have one learning style; teachers must not depend on one teaching style; teachers must be flexible.

Successful teachers may be buddies, disciplinarians, boisterous and flamboyant, intellectual, calm, dynamic, etc. A teacher-candidate whose personality is characteristically calm may not be able to identify with a supervising teacher who is boisterous or flamboyant. Teacher-candidates should observe how learning-teaching principles are employed by different teachers.

The inductive approach, while having the potentiality for producing self-direction and productive thinking, may be at a disadvantage when there is a discipline problem. The deductive method, owever, can be made dramatic. Both can and must be used.

Contacts with adolescents by teacher candidates should include observations of intergroup relations, behavior norms and abilities of urban youth. The program should include action-orientation (role-playing) and immediate reinforcement (knowledge of progress). Teacher candidate should have opportunity to examine and compare his norms with that of several sub-cultures that he might contact.

Teachers in language arts should have exposure to language dialectology; also to literature of minority groups. Teachers of Social Sciences should have exposure to a realistic examination of conditions that the pupil faces. In Math manipulative materials with strong audio-visual side and manipulations should be provided.

Field activities related to learning should be made within the framework of how to develop teaching strategies, how to develop readiness and for the preparation and orientation of subject-matter.

Illustrative examples of the process of learning should come not only from subject-matter areas but the world of work, college orientation programs for students who would not normally aspire to college, development of communication skills, and consumer and family skills. In order to lessen the degree of drop-outs emphasis should be placed on counseling; keeping a teacher with students for the entire year and spending time (2-3 hours a day with them) may provide opportunity for stronger identifications with adults symbolizing education; there is need for learning to work with parents and involving them in school activities.