A DEVELOPMENTAL PROGRAM FOR THE IMPROVEMENT OF TRADE-TECHNICAL TEACHER EDUCATION IN THE SOUTHERN STATES.

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DURING THE SUMMER OF 1966, 14 TRADE AND TECHNICAL EDUCATORS FROM COLLEGES OF THE SOUTHERN STATES MET AT UCLA IN A WORKSHOP DESIGNED TO PERMIT THEM TO WORK AS A GROUP ON PROBLEMS OF MUTUAL CONCERN. THEY PARTICIPATED WITH MORE THAN 500 TRADE AND TECHNICAL TEACHERS FROM CALIFORNIA WHO WERE ENROLLED IN THE UCLA SUMMER SESSION PROGRAM. THROUGH ACTIVE PARTICIPATION, THESE EDUCATORS WERE ABLE TO GAIN CONCEPTS AND METHODS WHICH THEY COULD INITIATE IN THEIR OWN PROGRAMS. IN ADDITION, THEY WERE ABLE TO EVALUATE THE TEACHER EDUCATION PROGRAM. A FOLLOWUP STUDY WAS MADE 8 MONTHS LATER TO IDENTIFY THE DEGREE TO WHICH THEY HAD INCORPORATED THE METHODS AND TECHNIQUES OBSERVED DURING THE TEACHER EDUCATION. (TC)
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TRADE AND TECHNICAL TEACHER EDUCATION
THE IMMORAL NEED OF MAN to exchange vocational commodities and services is depicted on the cover by art taken from an ancient Egyptian theme. The original is a tomb fresco, Pyramids of Sakkara, Old Kingdom, 4th Dynasty, circa 2550 B.C. Courtesy University of California at Los Angeles Art Library. Graphic design by Sam Anslyn.
A DEVELOPMENTAL PROGRAM FOR THE IMPROVEMENT OF TRADE-TECHNICAL
TEACHER EDUCATION IN THE SOUTHERN STATES

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OBJECTIVES

1. To develop a rationale for the improvement of trade and technical teacher education programs.

2. To provide teacher education experiences for the selected teacher educators that will permit them to duplicate or adapt them in their programs.

3. To assist in initiating an innovated trade-technical teacher education program in their own school and state.

4. To benefit from their appraisal of how well the teacher programs at UCLA meet their needs.

5. To develop a broad concept of the philosophy of vocational education.
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One of the characteristics of the contemporary period in trade and technical teacher education develops from the desire among teacher educators to seek better ways of achieving their goals. The words "evaluation," "self appraisal," and "introspection" are among those commonly used to identify a procedure or pattern of intensive review of teacher education. As a group, teacher educators have tended to "look on the other side of the hill" before embarking upon major changes in their respective programs.

The special six-week program at UCLA for selected teacher educators from southern colleges was planned with the definite purpose in mind of providing an environment in which the conference group could review their own programs. It has long been known that when a group is removed from the day-to-day activity and assembled in an entirely new environment, free from the usual local distractions, the members do in fact profit from the experience. The group of southern educators was not an exception to the rule. They were involved with more than five hundred trade and technical teachers in California. They noted procedures, processes, and content in the teacher education program. They discussed with many representatives of the California program the "why" behind each phase of the program and they sought answers to the question "So what? What does this experience mean to me in relation to my own program of teacher education at home?"

Special seminar meetings were held with the group for the purpose of providing an opportunity to discuss fundamentals, principles, purposes, present trends, future outlook, and other similar items. Such an exchange of professional points of view had value in that previous convictions were either changed or reinforced, and new concepts were developed.
Previous research at UCLA using small-group procedures in an actual instructional environment have produced excellent results in improvement of instruction in practical nursing. It was not surprising, therefore, that small-group procedures with trade and technical teacher educators would bear all the earmarks of potential innovations. That this will in fact happen could not be measured during the summer, but the characteristics of motivation were unquestionably present.

An additional element of the summer program was related to leadership characteristics. The group of southern educators completed questionnaires which were added to the California data bank of leadership data. A section in this report describes the group of southern teacher educators in terms of leadership characteristics.

Finally, it must be said that the presence of the southern educators in the environment of the California teacher education program of 1966 at Los Angeles was a professionally stimulating experience for members of the California teacher training staff.

Only in one respect was there no change in attitude of either the conference group or the California staff—all continue to hold that the teacher is in fact the key to all progress in trade and technical education.
At the first conference with the southern vocational educators, and before the six-week agenda was explained, the participants were requested to list the outcomes which they hoped to gain from their six-week attendance at UCLA.

These objectives coincided with the planned agenda at UCLA and, prior to their departure, the consensus of the participants was that they had acquired these outcomes.

The outcomes concerned further information on the following items:

**Philosophy**
- the overall purposes of vocational and industrial education

**Administration in California**
- information related to the organization and administration of the vocational program at the local, regional, and state levels
- how the total program is administered and the place of teacher education in the administrative pattern
- the use of consultants in the total program
- ways and means of securing teachers for technical-vocational education

**Teacher Training at UCLA**
- new concepts in teacher education
- new concepts in teaching
- concepts of future training
- new concepts of teaching large and small classes
- methods of speeding up the process of teaching
- techniques of upgrading teachers with little or no professional training but a great deal of work experience
Programs of Trade and Technical Education
-- a look at the California method of teaching vocational education
-- ways that may help in initiating a technical teacher education program at my school

Trade and Technical Education Curriculum
-- changes in technical education to meet the needs of industry
-- new areas in which curriculum materials may be developed
-- information and techniques related to curriculum building in trade and technical education
-- integrating and correlating vocational education activities and subject with general education
-- new curriculum and resource materials
-- information concerning new teaching media and aids in the areas of programmed materials and audio-visual instruction

Evaluation of Trade and Technical Education
-- how to evaluate a good program in industrial education
-- information related to evaluation at the class or teaching level

Student Selection and Placement in Trade and Technical Education
-- criteria for selecting students for vocational education

Visitation
-- an opportunity to visit some programs and observe the facilities and instruction

Federal Aid
-- to gain information concerning the various Federal programs

Advisory Committees
-- relationships with industry by California program
The primary objective of the trade-technical teacher education program in California is development of the technical instructor and promotion of the growth of the vocational educator. During the past five years, the program has continually undergone revision so that current developments applicable to trade-technical teacher education could be utilized. This effort has resulted in a program that is not a static but rather a dynamic program that makes use of team teaching, varying group activities, and constant evaluation.

Program operation. Except for the elective courses, all other courses use the team teaching technique. A team teacher cannot work as an individual as can the teacher who instructs a class by himself. He must work as part of a unit so that he can successfully relate his instruction to the material the other members of the team present. He must be present during an entire period of instruction being taught by the team so that he will be able to integrate his instruction with the joint presentations. Unlike many teacher education programs in which an instructor is brought from the outside to teach one or several classes and is left to determine his own instructional content, team teachers attend planning meetings prior to teaching their assignments. At these meetings they discuss in detail what they will teach and ways in which to best present their instruction.

The instructional material is multi-media. It includes workbooks, notes, instructional sheets, audio tapes, and programmed books. No textbook is used with the course, which thus necessitates the continual development of instructional materials designed to meet the ever changing program requirements. Closed circuit TV and video tapes are used and technical subject specialists are brought into the programs to make presentations when their specialties are needed.
Evaluation of the programs is made by the teacher educators, who make their own critiques of each teaching session. They also review the student critiques at the end of each course. In addition, discussion is held with supervisors in various districts to see how well the teacher education program has prepared the teachers on their staffs. Levels of expectancy are being developed so that at varying points throughout the teacher education program measurable behavioral changes that should occur within the teachers enrolled in the teacher education program can be measured.

Summer session program. The full-time teacher preparation program may be divided into three parts. These parts are (1) supervised teaching; (2) a two-summer, contiguous, spiralled subject program; and (3) elective courses specifically designed to aid in further development of the trade-technical teacher. For the purpose of this report only the summer session program will be discussed.

The summer session programs for the preparation of trade-technical teachers consist of 74 sessions spaced over a two-summer period. Twelve sessions are conducted the first summer and 12 the second. The program is so designed that subject content and activities are introduced and spiralled throughout the program to give a continuity and to emphasize the development of effective trade-technical teachers. Considerable emphasis is given to small group interaction and individual performance throughout the entire summer session program. Group sessions vary in size from groups of 180 persons, intermediate groups of 30, and small groups of 12 or six. As many as 32 modern air-conditioned rooms are in use for one class at the same time.

The instruction in the summer session classes is designed so that those enrolled experience learning from both a student's and teacher's point of view. The enrollees take tests and discuss the
results. They also review test scores of fellow enrollees. They perform tasks, such as presenting a one-hour practice lesson, and are critiqued; then they critique the presentation of another enrollee, who performs a similar task. They are taught to think on an analysis level so that they can analyze what they will teach. They do this by developing measurable teaching objectives and by identifying pertinent instructional activities that provide for student feedback and thus identify learning. This activity leads to development of instructional packages that contain concise statements of material that will be presented and activities that will provide feedback to the teacher. In addition, these packages contain instructional materials for both the student and the teacher. Through the use of examination analysis sheets, the summer session enrollees develop skills that ensure they test on what they taught and at the same time develop questions that discriminate between the good and poor students.

Many other activities are included in the summer session program. Those enrolled learn how to prepare programmed instruction. They develop skills for maintaining currency of their instructional programs with the occupation for which they are preparing the student. They also develop an overall understanding of and philosophy for vocational education.

The challenge for maintaining and improving the teacher education program has been met by continuing effort throughout the years. Revision and adaptation of course content have kept pace steadily with new educational processes. This flexibility has permitted the development of unique programs for trade and technical teacher education. The assistance of the southern educators in evaluating the summer session program is greatly appreciated.
Upper left: between classes at UCLA.

Upper right: Dr. Daniel Collins and Ralph Fosers.

Lower left: Final dinner-meeting program.

Lower right: Practice lesson demonstration.
While the primary purpose of the "Developmental Program for the Improvement of Trade-Technical Teacher Education in the Southern States" involved observation of the operation of the Core Program for trade and technical teacher training at the University of California at Los Angeles, a secondary related activity was programmed as being most important.

This second activity involved three hours each day being devoted to special conferences or field trips with the purpose of allowing the participants to correlate the theory of the university with the reality of on-going programs. The conferences were led by outstanding educators having long supervisory or administrative responsibilities in different phases of trade and technical education. One exception to this procedure was the several sessions on philosophy of vocational education. The field trips were directed to a high school, a junior college, an occupational center, a skills center and an instructional materials center, in order to show on-going programs and services in trade and technical education. In addition, two field trips were made to the administrative offices and to the Business Division of the Los Angeles City Schools in order to reinforce the necessity of good organization, administration, and supervision.
Introduction

During the past six weeks, the teacher trainers and supervisors of vocational education from the southeastern United States have made a number of interesting and helpful observations concerning the "Developmental Program for the Improvement of Trade-Technical Teacher Education in the Southern States" at UCLA.

As the result of the experiences which have been gained in the program, an attempt shall be made in this regard to cite problems, examine hypotheses, reach some conclusions, and indicate some implications.

Rationale

It has been suggested that specialists in vocational education have been long on practice and short on theory and philosophy and that they have worshipped the practical to the extent that theory and philosophy have been belittled or ignored.

In this report, vocational education is used in its more limited meaning. At the secondary school level, it refers to vocational programs; and, at the college level, to programs which are parallel to the vocational programs, as envisioned by the Smith-Hughes Act.

Perhaps the terms "theory," "philosophy," and "practice" should be clarified as they are considered here.

A theory helps to explain a situation by close examination of the underlying causes. Thus, it is possible to relate various generalizations so that we can "make sense" out of a situation. Ideally, a theory (1) is stated in terms of exactly defined concepts, (2) is internally consistent, (3) is developed deductively, and (4) is productive of further observations and generalizations.
With regard to philosophy, Socrates observed that "the unexamined life is not worth living." Thus, a spirit of inquiry is necessary. In addition, even practice must be justified in terms of principles rather than "regulations." Although we are not suggesting that every person should become a philosopher, we do believe that every situation must be observed in a larger context. Certainly, as educational leaders we do concern ourselves with philosophic questions, including those which concern values, causes, and outcomes.

As for practice, it is defined as "actual performance or application of knowledge, as distinguished from theory."

A few educators tend to take a good practice and make it a doctrine. In the process, they frequently overlook the basic reason for the practice in the first place, which is learning. The theory and the underlying philosophy of supervised practice would probably stand up under any fair evaluation as sound educationally, not only in vocational education but also in any other field.

Throughout history, a distinction has been drawn between the so-called "men of action" and "men of thought." Presumably, the same distinction can be drawn between "societies of action" and "societies of thought." The United States certainly belongs in the former category. We build great cities, bridges, highways, and even space ships to travel to other worlds. We produce consumer goods in great quantities. At the same time, some Americans scoff at "societies of thought," such as those which existed in ancient China and Greece, where men found reward in thoughtful reflection. These observers are even dubious of western Europe because of its attention to the intellectual tradition.

Practice rides higher than theory in most of what we do in the United States and should serve as a yardstick in measuring theory.
Practice checks and verifies theory. In studying the student as an individual, for instance, we developed a theoretical ideal like the "child centered" concept, where the teacher can try the idea in the classroom to see if it works. What he finds out will condition his point of view.

Theory fulfills a similar function. It helps us to check and judge practice.

Every important human endeavor can be shown to have a basis in theory. Physicists have their atomic theory, for example. Likewise in education there is a claim to theory, to the possibility of establishing general ideas which will explain and rationalize the various phenomena occurring in the educational endeavor. We seek to harmonize, integrate, rationalize, and to explain the different conceptions into that which we term philosophy.

It is our belief that the educational philosopher should seek a single formula through which human learning can be understood and managed. He can then look to his theory for guides to practical action when problems rise for which answers are not available.

Having a deep concept for a philosophy of education, an individual knows about what he is doing and why, and our educational endeavors will become more professional in nature. Our practical conduct is increasingly subject to critical theory. It is with this belief that we evaluate our experiences at the 1966 summer program at UCLA. We firmly believe that if anyone is to maintain some philosophy and theory in vocational education, the responsibility must lie with the teacher educators.

Evaluation
The remainder of this report includes a review of the experiences
provided at UCLA, and indicates how these experiences may be utilized in the teacher education programs of the colleges and universities of the participants. Finally, it presents recommendations that may be considered in planning future programs.

The Core Program at UCLA

The core program for trade and technical teacher education offered at UCLA is unique in its approach to teacher education. Its uniqueness is embodied in the core program and the team teaching approach in presenting subject matter. The traditional courses in trade and technical teacher training have been carefully reorganized to provide the type of crash training program for beginning teachers.

Despite the large numbers of persons enrolled and their wide range of backgrounds, interests, and needs, the program appears to provide a good foundation in the philosophy, methods, and mechanics of teaching vocational trade and technical education. The leaders placed special emphasis on the demonstration technique and learning by doing. Class assignments were carefully planned, scheduled, and evaluated. This provided the enrollees an opportunity to keep informed concerning their progress in the program.

Most of us have used some facets of the core curriculum and team teaching approach. We have made systematic attempts to fuse subject matter and to utilize specialists and consultants from other areas. It should be noted, however, that these approaches have not been planned as carefully or refined as highly as the core program at UCLA.

We believe the following aspects of the program will be of value to many of the teacher training institutions represented by the participants.

- the organizational structure of the program
- the assignment schedules and built-in plan for class feedback
- the wide variety of teaching aids and instructional materials employed
-- the plan for small group participation
-- the degree of flexibility maintained in the core program
-- the plan followed to insure the success of the team teaching approach
-- the approach to programmed instruction
-- the approach to validating subject matter tests (employing an item analysis, on each test question)

It should also be pointed out that we teacher educators, having a more traditional outlook, have some reservations concerning the depth of the material supplied in the core program. However, for the purpose of being more definitive concerning our observations of the core program, we have developed the following evaluation chart.
<table>
<thead>
<tr>
<th>Item Analysis</th>
<th>New Informational Cable</th>
<th>Functional Approach Items</th>
<th>Per Cent Reporting Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Keyed Instruction Sheets</td>
<td>63%</td>
<td>100%</td>
<td>106%</td>
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<td>Method of Illustrating Communication Barriers</td>
<td>42%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>Method of Illustrating Difficulty of Learning</td>
<td>100%</td>
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<tr>
<td>Controlled Notes</td>
<td>63%</td>
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<tr>
<td>Instant Evaluation</td>
<td>57%</td>
<td>100%</td>
<td>100%</td>
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<td>Time Line Presentation of History</td>
<td>7%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Getting Immediate Feedback from Class</td>
<td>21%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>&quot;Spiral Concepts&quot;</td>
<td>63%</td>
<td>100%</td>
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<td>Elementary Research Sequence for Vocational Teachers</td>
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<td>Group Dynamics</td>
<td>0%</td>
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<tr>
<td>Achieving Levels of Objectives</td>
<td>70%</td>
<td>100%</td>
<td>100%</td>
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<td>Film Slides and Window Shades</td>
<td>100%</td>
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<td>Jigsawed Illustrations</td>
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<td>The Four Methods of Grading</td>
<td>21%</td>
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<tr>
<td>Item Analysis</td>
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Field Trips
Several field trips were made to observe some aspects of the administrative approach of the Los Angeles City School Districts and certain educational programs in action. These observations included visits to the Los Angeles City Schools Administrative Offices, Los Angeles City Schools Business and Maintenance Division, Los Angeles Trade-Technical College, Los Angeles City Schools Adult Occupational Training Center in the San Fernando Valley, Watts Skills Center, North Hollywood High School, and the Los Angeles City Schools Instructional Materials Center.

All of these field trips helped to broaden the knowledge of the participants concerning the educational program of Los Angeles and the California approach to teacher training in vocational trade-technical education.

The field trips of greatest value to the participants included visits to:
- Los Angeles City Schools Trade-Technical College
- Los Angeles City Schools Adult Occupational Training Center
- Los Angeles City Schools North Hollywood High School
- Los Angeles City Schools Instructional Materials Center
- Los Angeles City Schools Administrative Offices

We believe that the following observations will be of value to the teacher educators from the southeastern region of the United States:
- evidence of the effort in vocational and technical education to meet the needs of industry
- information and techniques related to curriculum planning in trade and technical education
- methods and techniques of conducting classroom and shop instruction
- techniques for preparing and displaying teaching aids
- examples of vocational shops, their organization and layout
-- approaches for stressing shop safety
-- approaches for organizing and conducting shop instruction
-- example of the learning laboratory to supplement organized instruction
-- approaches to public information programs in vocational education
-- evidence of support from industry for vocational-technical education and methods of getting this support
-- approaches for recruiting and training teachers of industrial arts in California
-- advisory committees
-- methods of preparing resource materials and teaching aids

We recommend that in future programs opportunities be provided for visiting industries which are representative of the training objectives of the schools visited, as well as having a member of the industry advisory committee involved in talking to the participants.

Resource Speakers

The resource speakers who appeared before the participants were drawn from the California State Department of Education, the Los Angeles City Schools, the Los Angeles County Schools, and the Division of Vocational Education at UCLA. Each of these resource persons has acquired a wealth of training and experience in this area of specialization. Their presentations were well organized and helped the participants understand the California approach to vocational-technical education. Several speakers raised issues and described practices that were helpful in reinforcing certain values and beliefs held by the teacher educators.

The following speakers are cited for presentations that were helpful to the group:
Dr. Melvin Barlow presented several stimulating sessions concerning the philosophy and objectives of vocational education. The Barlow formula for self-improvement proved to be of special interest and significance to all participants.

Dr. Isaac McClelland for an interesting and comprehensive overview of supervision at the secondary level in the Los Angeles City Schools.

Mr. Sam Hamerman for his presentation concerning the E.O.A. programs.

Mr. Donald Reynolds for an interesting presentation concerning the approach of the Los Angeles City Schools to adult education. This presentation was carefully organized and illustrated with charts.

Mr. Lee Ralston's presentation concerning the supervision of trade and industrial education at the county and state level.

Mr. Jackson Eckstein's presentation on M.D.T.A. programs.

Mr. Harry Simonds who presented an overview of the apprenticeship program.

Mr. Mack Stoker's report on regional and state supervision in vocational education.

Recommendations
We feel that we have been greatly benefited by the field trips, and resource speakers and the observation of the core program in action. Further, we feel that any reservations that we may have about any of the activities are greatly overshadowed by the positive results attained.
However, we would like to point out some recommendations that we feel should be given consideration by the program coordinator. They are as follows:

Concerning the core program, we hope that
- the staff might re-study the method of presenting information on statistics
- additional references or a bibliography be provided for those who wish to pursue further some aspects of the core program

Concerning field trips, we believe that
- visitations should be provided to some industries employing graduates of vocational programs

Concerning conferences, we believe that
- it would be of value if a representative of industry who also was a member of an advisory committee, preferably of one of the industries visited, would talk to the participants

Concerning invitations to future programs, we believe that
- both teacher trainers and administrative people, either in general or vocational education, who can make policy decisions should be invited to attend
- both Negro and white educators should be invited to attend, particularly Negro and white members from the staffs of the State Departments of Education.
Commendations
We are highly appreciative of the work done by the members of the UCLA staff in conducting the core program. The proportion and presentation of instruction revealed the scholarly background of the staff.

We hesitate to point out any particular member of the staff, however, Dr. David Allen, Supervisor of Teacher Training, is to be highly commended for the success of the program.

We also wish to express our appreciation to Mr. Ralph Rogers, Supervisor, Trade and Technical Education, Los Angeles City Schools, for the very fine coordination of the field trips, group meetings, and for the instructional materials provided us.

Studying instructional charts at Los Angeles City Schools
Instructional Materials Center
Upper left: Informal meeting with Dr. Collins.

Upper right: Practice lesson demonstration.

Lower left: Textbook exhibit.

Lower right: Dinner meeting entertainment.
The following items and comments concerning the beneficial aspects of the core program at UCLA were listed by one or more of the southern educators in their weekly reports.

The Core Program at UCLA

-- The arrangements and cooperation of the teacher education staff for the handling of the core program.
-- The interest of prospective teachers as indicated by enrollment.
-- The unique features of the program:
  1. The team teaching approach avoids the overlapping of subject matter.
  2. When needed, the course relates one phase of teaching to another.
  3. Gives an overview of the whole teaching field.
-- The actual handling of the students by the staff and the ease in which the students responded.
-- The materials and techniques necessary to measure student progress with validity and reliability.
-- The preparation of instructional materials and the motivation of large classes.
-- Total coverage of subject matter in a core program is possible. I was highly impressed with the scope and coverage of the subjects as presented by a well coordinated and informed team of teachers. It is axiomatic that groups as large as we have observed would be difficult to control and teach effectively. But this does not seem the case here. The apparent ease with which the program flows reflects time and hard work put into its organization.
-- Lecture on "Foundations of Education."
-- Lecture on "Technological Advancements."
-- Lecture on "Manpower: The Challenge of the Mid-Sixties."
-- Demonstration lesson on "How We Walk" by Dr. Hall and the techniques used: visual aids, delivery, motivation, vocabulary, etc.
Immediate feedback and testing techniques.
- Dr. Allen's presentation on methods and techniques of instruction.
- Team teaching in action.
- The organization and preparation of instructional materials.
- Dr. Barlow's "Content vs Process Theory."
- The four teaching levels.
- Use of charts and posters in teaching safety.
- Re-teaching.
- The "Barlow Formula" for self-development.
- Group instruction programmed and scheduled to use the minimum amount of time and facilities which render greater service per capita cost.
- Individual and group conferences.
- Presentation of a history lesson by visual techniques.
- Group organization of within two hundred students assigned to one class.
- The challenge given to vocational teachers concerning a philosophy of vocational education by Dr. Allen. The manner in which he focused attention on this aspect and the challenge to the teachers to look to themselves for the answer was very effective.
- The advantageous use of team teaching and use of instructional aids as done in the core program.
- Dr. Allen's lecture on Federal vocational legislation.
- The tremendous amount of materials developed for the daily sessions.
- The development of the "instructional package."
- The core program has been of great value to me through first hand experience plus so much hand-out materials which I shall duplicate.
- Lecture on approaches and methods of teacher grading by Dr. Allen.
- Dr. Allen's point of view on control of cheating.
Mr. Mandelbaum stressing the need to prepare students for the world of work other than with skills and technical information. I realize the need for the type of information he presented and I also see much to be derived from his talk.

Dr. Allen again proved himself to be a master teacher as he presented the topic, "Responsibility for Student Preparation." His presentation should be an inspiration to any teacher to try and develop many different ways of presenting lessons.

Conferences
The following items and comments were listed by one or more of the southern educators concerning the beneficial aspects of the several conferences dealing with principles and practices of vocational education and which were led by resource people.

- The seminar dealing with principles and practices of vocational education led by Dr. Barlow.
- Regardless of whether or not one is cognizant of the numerous new programs assigned to aid individuals gain skills, knowledge of the basic tenets or philosophy of vocational education is essential. I am particularly pleased that this important aspect of vocational education is being reinforced.
- Curriculum development led by Mr. Rogers.
- The concept of the individual.
- Session on apprenticeship education, and how this phase of education combines training resources of industry, government, and schools in the development of skilled and productive individuals.
- Session on MDTA programs -- their scope and the involvement of public schools in training and retraining.
- The role of the California State Department of Vocational Education and regional offices in the supervision of vocational education.
- Procedures in handling the itinerant teacher training program in California.
-- Explanation and scope of the EOA programs and the type of programs operated by the public schools.
-- Responsibilities and limitations of county and school district organizations.
-- Overview and changes in structure of the American Vocational Association as outlined by Mr. Lee Ralston, Vice-President of AVA Trade and Technical Division.
-- Technique of evaluation of a vocational program.
-- Session on vocational education in the adult schools and junior colleges.
-- Useful steps on how to evaluate programs of vocational and technical education.
-- A new method of directed teaching through better organized methods of instructional materials.
-- The speech and round table discussion by Dr. Collins had great impact.
-- If the materials and techniques which we have seen here at UCLA are fully utilized, we will never end up behind the eight ball.

Field Trips
The following items and comments concerning the beneficial aspects of the several field trips were listed by one or more of the southern educators.

-- The volume of activity, organization, and supervision within the Los Angeles City School system is almost beyond belief.
-- Organization seems to be the key word in the Los Angeles City School System.
-- Los Angeles City School System centralized for administration and decentralized into districts for supervision.
-- The services provided to teachers by the huge and efficiently organized business and maintenance division of the Los Angeles City Schools.
Handout materials, explanations, visual aids, and short talks during the first two field trips served to acquaint us fully with the organization and operation of the school and business organizations. The opportunity to ask questions, and additional knowledge to gain reinforcement from competent individuals gave us fuller understanding of that which we saw on the field trips.

Vocational education designed to service the communities in Los Angeles by age grouping and grade levels.

The philosophy, structure, and programs of the secondary schools in Los Angeles. The information concerning teacher requirements and qualifications was most helpful.

Administrative structure for promoting education in a large city system.

The valuable information and resource materials given to us on each field trip.

The retraining program at the Adult Occupational Training Center.

The potential positive implications of the Watts Skill Center (MDTA).

The trips to the Adult Occupational Training Center and to the Watts Skills Center are good examples of some of the things that can be done in vocational education. The dedication of the personnel at these centers was the kind of dedication that we can take note of and profit from.

The thorough preparation of teachers as revealed in the attitudes and interests of the staff at Los Angeles Trade-Technical College and how this is passed on to students by precepts and example.

Our visit to Trade-Tech was very impressive in that we had an opportunity to see and hear about an industry-based school which offers a large number of vocations and the total sequence of training including guidance through placement. Its magnitude and administration make it a truly outstanding institution for training of youth.
Without doubt, the trip to Trade-Tech has been the most broadening of my experiences during the workshop.

The open-door policy and method of selecting students at Trade-Tech.

The trip to the Los Angeles City Schools Instructional Materials Center was very impressive, especially the leadership shown by its director. Displayed were outstanding planning and coordination.

The large variety of visual aids and their construction as seen at the Instructional Center was inspiring. Many of the ideas on display can be adapted in my school.

Very impressive were the instructional aids of all descriptions, including film-slides, instructional kits, portable display board, programmed materials. The IBM film distribution system was equally impressive.

The huge TV studio at the Instructional Materials Center.

The organization of the Adult Occupational Training Center (Los Angeles City Schools) and its unique methods and techniques in programmed instruction.

The field trip to North Hollywood High Schools. Here we observed excellent examples of shop planning, shop organization and teaching aids.
In addition to the many questions raised at the daily conferences, the southern educators were requested each week to submit additional written questions which needed further implementation. Examples of these questions follow:

**Teacher Training**

- Would team teaching be effective in small classes?
- How does the beginning teacher from industry having only a high school education understand the many terms in psychology used in the first section of the core program?
- Is there any evidence from the completed assignments that the accelerated pace set by the staff is well suited to the majority of the students?
- Is not the "dosage" in statistics rather heavy? I would like to know how successful the students were in getting their assignments done.
- How did the core program develop?
- Will you give a further explanation of the spiral concept of learning?
- May we see copies of the mid-term tests and an item analysis of each? I believe that this information would help to reveal the effectiveness of teaching and testing.
- Are new instructors given an opportunity to observe classes in operation before assigned a full instructional load?
- What is the relation between the summer courses at UCLA and your itinerant teacher training program?
- Is it not possible that a bibliography could be furnished students, even though it is not necessary for them to have the additional information to meet course requirements?
- If we recognize that the good instructor must want to teach, what can we do as instructors to develop this desire in ourselves?
Questions are essential teaching tools, their skillful use is part of the instructor’s trade. To what extent should the instructor aid the timid student in an attempt to obtain a response?

-- What type of evaluation should be used in test construction for the failing student?

-- What can be done in teacher education to develop a strong dedication to duty?

-- On what basis do you determine how many periods you devote to any specific subject in the core program?

-- What type of training chart is best used for vocational education?

-- Several references have been made to a proposed study of trade and technical education teachers in California.

1. What are the objectives of this study?
2. What kinds of sampling techniques will be employed?
3. What procedures will be followed?
4. What occupational areas will be covered among the vocational teachers?

Conferences

-- What methods could be used in expressing the values of vocational education to local school administrators?

-- Can vocational education offer needed quality programs simultaneously to all persons living in an urban area:

1. The well-motivated and academically talented student?
2. The youth with special needs who requires supplemental help so he can succeed in the regular program?
3. The adult who requires initial training or retraining?
4. The suburban youth and adults who need and want vocational education?
-- How can a new prestige image of vocational and technical education be developed to overcome the general apathy by youth, adults, and the general public toward occupational training?
-- How can public relations for the semi-illiterate public be more productive in terms of greater participation in vocational programs?
-- Concerning Dr. Barlow's paper titled, "Projections for Trade and Technical Teacher Education," he made the following statements: "There is an air of acceleration around us. We are a mite uncomfortable in the new pace. A truth discovered at sunrise may be discredited by nightfall. A five-year plan needs revising in six months." Considering these statements, what are some of the new changing course offerings?
-- Do key administrative personnel know from first-hand observation what is going on in the classrooms and shops?
-- In the process of evaluating or constructing the model leader or supervisor in vocational education, how do you classify the nonconformist or highly specialized individual?
-- For each of the following techniques of evaluation, please indicate its major limitations and major strengths in specific situations: observations on the job, personal interviews, and questionnaires?
-- How much community participation was involved in the planning of your skills centers?
-- It has been suggested that effective teaching involves giving the student tools for forming judgments. How may we accomplish this objective in vocational education? How may we evaluate the results?
-- What role should the student have in formulating the objectives and course content in vocational education?
-- How does the student help with the process of evaluation?
-- How do you take advantage of available governmental aid for trade training in which there is a national shortage of skilled workers, but no serious unemployment in the community area?

-- May we have more information on the junior college AA degree in regard to time in shops and in other classes?

-- Are there distinct advantages in operating post-high school vocational programs when we note the high attrition rate for high schools? Can we identify specific occupational training areas with different types of schools? Should all vocational-technical training be moved out of the high school into the post-high schools?

-- What pre-requisites for enrollment in post-high schools should be required?

-- Will you give us more information about the mechanics of Los Angeles Trade-Technical College?

-- What training courses have been phased out at Trade-Technical College? How do you determine when an area should be eliminated? What is the procedure?

-- Will it be possible to review descriptive material concerning the offerings of the several junior colleges in the Los Angeles area?

-- What individual agency is responsible for initiating programs for adult education in the local schools? How is the need for these programs determined and who recruits the participants?

-- What is the scope of the adult education program conducted by the Los Angeles City Schools? How is it planned, supported, and conducted? What are the requirements for admission?

-- To what extent are joint apprenticeship committees responsive to changing job requirements and manpower needs?

-- How does an advisory committee function in curriculum building or planning?

-- What is the percentage of placement of the industrial education programs in the comprehensive high schools?
-- What is the function of the secondary school curriculum council?
-- At what grade level should vocational programs start in the high school?
-- Should all junior high students experience an occupational oriented curriculum in a broad sense?
-- What do you present in the way of occupational orientation of pre-vocational education on the elementary and junior high levels?
-- Should vocational schools and the curriculum for general academic programs be separated as has been the case in some areas?
-- What are your methods of producing visual aids? Are they teacher made or are they produced by special services? I would like to see this phase of your program.
Introduction
It was a very rewarding and educationally profitable experience to have served as coordinator of activities for the southern vocational educators during their six weeks attendance at UCLA. The exchange of information and ideas was not a one-way process. We gained many valuable insights, understandings, and techniques. The fifteen visiting educators had amassed in excess of 300 years of service in the field of vocational education, the major span of which was spent in teacher-training institutions. Their problems and difficulties over the years were monumental, but so were their accomplishments and successes. They have done and are doing a remarkable job in vocational education.

Enthusiastic Participants
Despite their long careers in vocational education, the southern educators eagerly participated in the heavy schedule that was outlined for them at UCLA. They listened, took notes, entered all discussions, asked searching questions and, when not satisfied with all answers, they researched on their own initiative.

Responsibilities of Southern Educators
Of the fifteen southern educators in attendance at UCLA, two are from state departments of vocational education, their primary responsibility being in the field of in-service training and itinerant teacher training; two are directors of vocational education departments having responsibilities for teacher training in all phases of vocational education; three are chairmen of industrial education departments; seven are primarily concerned in teaching a unit shop for prospective teachers as well as craft training for students who will enter industrial employment; and one is a director of manpower policy evaluation and research at his college.
Curriculum Pattern at Southern Colleges

The pattern of the curriculum in the southern colleges represented by the participants appeared to be a combination of a four-year sequence leading to a baccalaureate degree in industrial arts and a two-year craft training program for youth who would enter employment in industry. The regular vocational credential is issued to those persons having completed the four-year program as well as two years of employment in industry. In some cases, however, a vocational credential may be issued without the baccalaureate degree. The courses leading to the degree are outlined in the traditional pattern characteristic of many colleges.

The Core Program at UCLA

The core program at UCLA with its integrated subject material, team teaching, relatively short length of student attendance, and its large number of students was a radical departure to the southern educators who long have operated under the traditional pattern. It was natural, therefore, that many questions would be projected as to the effectiveness of the core program. Upon seeing it in action, however, the visitors were impressed with its operation.

Conferences

The conferences provided the southern educators full opportunity to discuss any topic which interested them, and these discussions were most fruitful. Their direction was threefold: (1) they provided the participants the opportunity to raise questions and to clarify salient points concerning the core program, (2) they provided the opportunity to meet and freely discuss with supervisors and administrators of school programs the actual problems confronted in the operation of
vocational programs, and, (3) the conferences provided each participant the opportunity to reinforce his own convictions concerning the basic tenets or philosophy of vocational education. One problem common to all the resource people was that of teacher competency.

Field Trips

Field trips to various educational facilities in the Los Angeles City Schools System provided the southern educators a partial opportunity to study the effectiveness of UCLA's teacher-training program as well as to vocational classes in action. Unfortunately, during the summer session, few programs are in operation and those which are scheduled are not operating to the maximum. Despite these drawbacks, the trips proved to be very valuable experiences to the southern educators.

Instructional Aids and Materials

The visitors were most impressed with the quantity and quality of the instructional aids and materials which they were exposed to both in the core program and on field trips. One unexpected outcome was their eagerness to collect all types of instructional materials. In fact, most of the participants accumulated a rather sizeable amount before they departed.

Recommendations

It is my opinion that the southern educators derived a great benefit from their attendance at UCLA. However, to produce any changes in the traditional teacher-training programs in southern institutions, I concur with the recommendations of the participants that administrators who can effect policy changes should be invited to any future programs.
-- It would be helpful if we could have in advance the list of participants and their job responsibilities. For example, if many have itinerant teacher training as a primary responsibility, special emphasis on this phase can be included on the program. If administrative people are invited, plans can be made to expose them to the administrative procedures in this area.

-- It would be most helpful if a description and the objectives of the core program be sent in advance to all participants.

-- Because of the interest in instructional materials developed in California, an effort should be made to list and to have on hand such material for distribution.

-- A visit to a school or trade advisory committee meeting should be scheduled, although this may prove difficult as few advisory committees meet during the summer.

-- A field trip be scheduled to an industry employing graduates from our local industrial education programs.
APPENDIX

A:

PARTICIPATING

Mr. William K. Baker  
Assistant Professor  
Virginia State College  
Petersburg, Virginia

Mr. Joseph Battle  
Associate Professor  
Prairie View Agriculture & Mechanical College - Prairie View, Texas

Mr. Nathaniel Buford  
Chairman, Dept. of Industrial Education  
Alcorn Agriculture & Mechanical College  
Lorman, Mississippi

Dr. Carlyle H. Chapman  
Director, School of Vocational Education  
Southern University  
Baton Rouge, Louisiana

Mr. William L. Craig, Jr.  
Assistant Professor  
Virginia State College, Norfolk Division  
Norfolk, Virginia

Mr. Hurthle L. Currie  
Assistant Chairman, Trade and Industrial Teacher Training  
Agriculture, Mechanical & Normal College  
Pine Bluff, Arkansas

Mr. Worrell Gaiter  
Associate Professor  
Florida Agriculture & Mechanical University - Tallahassee, Florida

Mr. Hayes Howard  
Director of Manpower Policy Evaluation and Research  
Tennessee Agriculture and Industrial State University  
Nashville, Tennessee

Mr. Joseph R. Jenkins  
Assistant Professor  
Alabama Agriculture & Mechanical College  
Normal, Alabama
Upper left:
William K. Baker

Upper right:
Joseph Pattle

Lower left:
Nathaniel Buford

Lower right:
Carlyle H. Chapman
APPENDIX

B:

PROGRAM

Dr. Daniel Collins  California State Board of Education
Member

Miss Elizabeth Dawson  Professional Library
Supervisor  Los Angeles City Schools

Dr. Calvin Dellifield  Adult Occupational Training Center
Principal  Los Angeles City Schools

Mrs. Margaret Divizia  Instructional Materials Center
Administrator  Los Angeles City Schools

Mr. Jackson Eckstein  MDTA
Supervisor  Los Angeles City Schools

Mr. J. Lyman Goldsmith  Vocational Education
Coordinator  Los Angeles City Schools

Mr. Sam Hamerman  Office of Urban Affairs
Administrator  Los Angeles City Schools

Dr. Richard Jarrett  Business Services
Administrator  Los Angeles City Schools

Mr. Edgar LaFetra  Los Angeles Trade-Tech. College
Coordinator  Los Angeles City Schools
Public Information

Dr. Isaac McClelland  Division of Secondary Education
Area Superintendent  Los Angeles City Schools
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Dr. Dellifield
Mr. McLeod

Teacher Education Staff

Mr. Reynolds

Teacher Education Staff

Mr. Kimbrough

Teacher Education Staff

Dr. Barlow

Teacher Education Staff

Mr. Rogers

Teacher Education Staff

#1, 2, 3, 4 (See page ii.)

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A DEVELOPMENTAL PROGRAM FOR THE IMPROVEMENT OF TRADE-TECHNICAL TEACHER EDUCATION IN THE SOUTHERN STATES

EIGHT MONTH FOLLOW-UP STUDY
A DEVELOPMENTAL PROGRAM FOR THE IMPROVEMENT OF TRADE-TECHNICAL TEACHER EDUCATION IN THE SOUTHERN STATES

EIGHT MONTH FOLLOW-UP STUDY

David Allen, Principal Investigator
Supervisor, Trade and Technical Teacher Education

Melvin L. Barlow
Director, Division of Vocational Education, University of California

Ralph M. Rogers, Program Coordinator
Supervisor, Trade and Technical Education, Los Angeles City Schools

- Vocational and Technical Education Contract OEG 4-6-062861-1957
- Vocational Education Act of 1963, Section 4 (C)
- Project reported herein was supported by a grant from the U.S. Department of Health, Education, and Welfare.
INTRODUCTION

During the 1966 UCLA summer session for trade and technical teacher education, 14 educators from colleges of the southern states participated in a specifically designed workshop that not only permitted them to work as a group on problems of mutual concern but also involved them in the total trade and technical teacher education program. They participated with more than 500 trade and technical teachers from California who were enrolled in the summer session program. Through active participation in the teacher education program these educators were able to gain concepts and methods that they could initiate in their own programs and in addition they were able to evaluate the teacher education program.

This report is concerned with a follow-up study of the southern educators to identify the degree to which they have incorporated the methods and techniques that they observed at UCLA into their own teacher education programs. After eight months they have had an opportunity to reflect and re-evaluate their experiences. The extent to which they are now utilizing, to some degree, the methods and techniques observed during the teacher education program, identifies not only items that were of value to them but, in some measure, evaluates the effectiveness of the UCLA summer session program.

The trade and technical teacher education staff at UCLA was fortunate in conducting the summer session workshop, for they too, learned and benefited from the suggestions and exchange of ideas that were afforded by these highly experienced educators.
FOLLOW-UP QUESTIONNAIRE

The follow-up questionnaire was designed to investigate the items that the southern educators evaluated during the workshop at UCLA and which was reported in A Developmental Program for the Improvement of Trade-Technical Teacher Education in the Southern States. Table I (page 3) summarizes the responses received from the southern educators. The questionnaire was mailed to all 14 participants. Of the 14 educators who took part in the workshop, one was on sabbatical leave and could not be reached by mail. The returns, therefore, contain responses from the remaining 13 educators.

RESPONSE BY ITEMS

The educators' initial evaluation of a list of topics covered in the summer workshop had rated 15 as both "functional" and "applicable." In addition, items were rated as "new information" or "new approach." These 15 items, therefore, formed the basis of the eight-month follow-up. Response by individual items is given below.

Color Keyed Instruction Sheets.

This item was rated as "new information" by 63 percent of response in the post-workshop evaluation. In the follow-up, 77 percent of respondents said the material was being used, and 33 percent said they planned to use it, making a total of 100 percent.

### Table I

**EIGHT MONTHS FOLLOW-UP SUMMARY.**

<table>
<thead>
<tr>
<th>REPORTING ITEMS</th>
<th>USED</th>
<th>PLAN TO USE</th>
<th>NOT USED</th>
<th>NO ANS.</th>
<th>COMMENTS ON ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Keyed Instruction Sheets</td>
<td>10</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Illustrating Communication Barriers</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of Illustrating Difficulty of Learning</td>
<td>6</td>
<td>6</td>
<td></td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Controlled Notes</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instant Evaluation</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Line Presentation of History</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting Immediate Feedback from Class</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiral Concepts</td>
<td>4</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Research Sequence for Vocational Teachers</td>
<td>6</td>
<td>6</td>
<td></td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>9</td>
<td>3</td>
<td></td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Achieving Level of Objectives</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film Slides and Window Shades</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jigsawed Illustrations</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>The Four Methods of Grading</td>
<td>7</td>
<td>6</td>
<td></td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Item Analysis</td>
<td>6</td>
<td>6</td>
<td></td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Comments of the respondents indicated a high level of approval for this material: "Good response from class;" "Highest rating;" "Have proven helpful in retention of information;" are typical comments.

Method of Illustrating Communications Barriers

Rated as "new information" by 42 percent in the 1966 evaluation, this approach was being used by 46 percent of respondents, while an additional 31 percent stated they planned to use it. One respondent characterized it as "Very helpful."

Method of Illustrating Difficulty of Learning

In the initial evaluation, all respondents rated this as "new information." The technique is being used by 46.1 percent of respondents; an additional 46.1 percent plan to make use of it. There was no response from 7.7 percent of the group. One educator said, "A greater emphasis is being placed on this item."

Controlled Notes

This method of note-taking was found to be "new information" by 63 percent of the respondents in the post-workshop evaluation. Seventy-seven percent of the respondents in the follow-up inquiry said they had put it to use; an additional 15.3 percent plan to put it to use. Comments included: "I have found controlled notes to be most helpful to my students;" and "Among the new items that have proven successful and created interest in students."

Instant Evaluation

This item, rated as "new information" by 57 percent of the workshop
participants, proved to be in current use by 100 percent of the educators responding in the follow-up. There were several commendatory statements concerning it, including: "Good technique;" "Very helpful;" "Deserves the highest rating;" "Assists in emphasizing key points;" "Good to motivate the students and to hold interest."

**Time Line Presentation of History**

Seven percent of response in the initial evaluation rated this item as "new information." In the follow-up, 46.1 percent of respondents said they were using it, and an additional 23 percent indicated they were planning to use it. One educator said that it was being used "in tracing certain developments in the areas of Woodworking and Surveying."

**Getting Immediate Feedback From Class**

Rated as "new information" by 21 percent of the educators in the post-workshop evaluation, this item was being used by all respondents to the follow-up query. "The majority of the class in Methods of Instruction was pleased with this technique," commented one respondent. Other comments were: "Very good" and "Created much interest in class groups." Another respondent said, "Already in use, but some changes have been made."

"Spiral Concepts"

Although 63 percent of the initial evaluation categorized this item as "new information," in the re-check 31 percent of respondents said they were using it. An additional 69 percent, however, said they planned to use it, totaling 100 percent of the group for eventual incorporation of this device into program.
Elementary Research Sequence for Vocational Teachers

There was no rating of this item in the workshop evaluation beyond "functional" and "applicable." In response to the follow-up query, however, 46 percent of the educators stated that they were using this item and an additional 46 percent, that they planned to do so. One respondent planning to use the item said that it is "already in use, but will be expanded in keeping with information received during workshop."

Group Dynamics

This item, too, received no rating in the initial evaluation as either "new information" or "new approach." Response to the follow-up, however, showed that 69 percent of the educators were using it, and 23 percent were planning to do so. One respondent, who indicated he was using the technique, added a comment, "Have used this for a number of years." Other remarks were: "A very good technique," and "Very helpful."

Achieving Level of Objectives

This was rated as "new approach" by 70 percent of response in the initial evaluation. In the follow-up, 54 percent of respondents stated that they were making use of the item and 31 percent indicated that they planned to do so. One respondent, who failed to check off any column in the check-list, added the comment, "I have developed a greater awareness of this item."

Slide Films and Window Shades

All respondents in the post-workshop evaluation rated this item as a "new approach." In the follow-up, 77 percent stated that they were making use of the device, and 15 percent indicated that they planned to
Some of the comments were: "Being used extensively;" "Readily accepted by class;" "Plan to use window shades;" "Film slides already in use; shades not used at this time."

**Jigsawed Illustrations**

This item, too, was received by all workshop participants as a new approach. In the re-check, however, only 8 percent of participants said they were using the device, although 46 percent indicated that they intended making use of it. One said he had "attempted to develop a jigsawed illustration on several problems in Home Economics and Agriculture." Another, who did not mark this item in the checklist, said he "may use later." A third, who indicated that he planned to use jigsawed illustrations, added, "I hope to develop this item in the future."

**The Four Methods of Grading**

Only 21 percent of the workshop participants had rated this item as a "new approach." On the re-check, however, all indicated that they either were making use of it (54%) or were planning to do so (46%). One respondent added, "Further developed--already in use;" another said, "We'll use some aspects of this;" and a third stated, "I am presently working on this item."

**Item Analysis**

This item had been identified as a "new approach" by 63 percent of the respondents in the initial evaluation. In the follow-up, 46 percent replied that they were making use of it, and another 46 percent said
they planned to do so.

**Total Response for All Items**

The check-list showed 15 individual items; multiplied by the total number of educators responding, the figure for all potential response is 195. Analysis of the returns is shown in Table 2, below.

**Table 2**

<table>
<thead>
<tr>
<th>Response</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have used</td>
<td>114</td>
<td>58.5</td>
</tr>
<tr>
<td>Plan to Use</td>
<td>60</td>
<td>30.8</td>
</tr>
<tr>
<td>Total</td>
<td>174</td>
<td>89.3</td>
</tr>
<tr>
<td>Not used</td>
<td>16</td>
<td>8.2</td>
</tr>
<tr>
<td>No answer</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Analysis of the check-list to ascertain proportion of use for the various items, is tabulated in Table 3. The table lists the items in descending order.

**Table 3**

<table>
<thead>
<tr>
<th>Rank Order of Items in Use</th>
<th>Number of Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In Use</td>
</tr>
<tr>
<td>Instant Evaluation</td>
<td>100%</td>
</tr>
<tr>
<td>Getting Immediate Feedback</td>
<td>100%</td>
</tr>
<tr>
<td>Color Keyed Instruction Sheets</td>
<td>777</td>
</tr>
<tr>
<td>Controlled Notes</td>
<td>777</td>
</tr>
<tr>
<td>Film Slides &amp; Window Shades</td>
<td>777</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>697</td>
</tr>
<tr>
<td>The Four Methods of Grading</td>
<td>547</td>
</tr>
<tr>
<td>Achieving Level of Objectives</td>
<td>547</td>
</tr>
<tr>
<td>Illustrating Difficulty of Learning</td>
<td>467</td>
</tr>
<tr>
<td>Elementary Research Sequence</td>
<td>467</td>
</tr>
<tr>
<td>Item Analysis</td>
<td>467</td>
</tr>
<tr>
<td>Illustration Communication Barriers</td>
<td>467</td>
</tr>
<tr>
<td>Time Line Presentation of History</td>
<td>467</td>
</tr>
<tr>
<td>&quot;oral Concepts&quot;</td>
<td>317</td>
</tr>
<tr>
<td>&quot;oral Illustrations&quot;</td>
<td>87</td>
</tr>
</tbody>
</table>
RESPONSE BY EDUCATORS

Following is an analysis of results of the follow-up survey by individual respondents (educators), showing the number of items in use or planned for use, along with any comments appended to the check-list. The schools are listed in descending order by number of topics currently being used.

School A: Using 11 items; planning to use 4 more. Total, 15.

Comments: I have used eight items marked "X" in my Methods of Teaching class for the first semester. The students are now assigned to schools in the state for cadet teaching. It will be very interesting to note the results when they turn. I have not developed these items as fully as I would like; however, all items were effective.

Our Director, Division of Vocational Education, used the two items marked "XX" in his course, "Principles of Vocational Education." Four items marked "XXX" are to be used later. Concerning the last item, "Film Slides and Window Shades": film slides are being used now. We plan to use the window shades later.

School B: Using 11 items; planning to use 3 more. Total, 14.

Comments: Many of the items listed have been used by me in one form or another while conducting my classroom and shop instruction, which at present are in the areas of Surveying, Woodworking, and Freshman Guidance. Since attending the 1966 summer workshop at UCLA, I have attempted to use several items geared to my subject matter and based on the format received in the workshops. This has proven successful and created interest in these classes. As examples: Controlled Notes, Instant Evaluation, and Immediate Feedback from Class. Some other items have required changes...
and modifications in order to meet our immediate needs.

School C: Using 10 items; planning to use 5. Total, 15. No comments.


Comments: The experience which I had during the six-week workshop at UCLA has been most helpful. For example, I have been able to put into use many of the new ideas which I received.

School E: Using 9 items; planning to use 6. Total, 15.

Comments: I have found it impossible so far to use and perfect to my needs to the fullest, all of the techniques and methods attained at the UCLA workshop. As time goes by and my teaching load is reduced, allowing more time for preparation, I plan to utilize them. I certainly think the workshop was worth while and my six weeks well spent.

School F: Using 9 items; planning to use 6. Total, 15.

Comments: During the week following my return from the UCLA 1966 summer workshop, we had our state summer conference. It was quite fortunate for me, because I had the opportunity to explain your program to most of our vocational teachers.

The items checked "used" are the ones they all felt they should begin using immediately; and the ones marked "plan to use:" are those they felt would take some time to incorporate into the program, but are anxious to try. I've mimeographed much of your UCLA material and have distributed it to all of the teachers. Many of my teachers have benefited from my participation in the workshop.

I have attended several workshops, but this one has proven more beneficial to me than any others. Many thanks to you and your very capable staff. If at any time I can be of further service to you, please
call on me.

School G: Using 9 items; planning to use 4 more. Total, 13.

Comments: Many of the experiences gained in the UCLA workshop on Trade and Teacher Technical Education proved extremely helpful in our situation at A & T College. The following experiences, however, deserve the highest rating:

1. The team approach to teaching employed by the staff.
2. The carefully planned color keyed instruction sheets and exercises used to supplement formal classes.
3. The techniques employed by the staff to diagnose learning difficulties in large classes.
4. The techniques employed for instant evaluation.
5. The wide variety of teaching aids used to reinforce learning.

I found the workshop both meaningful and practical. Moreover, I would recommend the same approach for other groups who may be interested in gaining fresh insight and up-to-date information concerning the preparation of teachers for vocational teacher education.

School H: Using 8 items; planning to use 6 more. Total, 14.

Comment: My report to our faculty was received with much enthusiasm. The responses to the check-list are from the Resident and the Itinerant Teacher Trainees, who are responsible for the program development in Teacher Education. The college is preparing a report of our use of the materials, techniques, etc., that we gained from my attendance at the workshop last summer. You will receive this very soon.

School I: Using 8 items; planning to use 5 more. Total, 13. No comments.

School J: Using 8 items; planning to use 5 more. Total, 13.

Comments: I must state again that the workshop was very helpful and
served to remind me of the responsibilities involved in teacher training. I was impressed by all aspects of the teacher training program. Most impressive to me, however, was the information I received concerning Immediate Feedback, Item Analysis, Achieving Levels of Objectives, Marking System, and the Instructional Package.

**School K:** Using 7 items; planning to use 6. Total, 13. No comments.

**School L:** Using 6 items; planning to use 5. Total, 11. No comments.

**School M:** Using 5 items; planning to use 4. Total, 9 No comments.

**SUMMATION**

The southern educators who participated in the 1966 UCLA trade and technical teacher education program have indicated that they are planning to use 30.8 percent of the methods and techniques they observed and are using 58.5 percent in their program at the present time. Their indication of being able to utilize 89 percent of the methods and techniques reinforces the concept that national workshops which permit cross-pollination of ideas between industrial teacher educators can lead to nothing but improved trade and technical teacher education programs throughout the nation.

The presence of the southern educators in the environment of the UCLA teacher education program was a professionally stimulating experience for the members of the UCLA teacher training staff. The workshop was a very rewarding and educationally profitable experience to all concerned. It is hoped that similar activities will be made available in the future.