A COMPARATIVE STUDY OF THE EFFECT OF TWO INSTRUCTIONAL MODES ON THE ACHIEVEMENT LEVELS OF SELECTED FOURTH GRADE STUDENTS

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Dedicated to

Maria, Greg, Jr., and Jamela,

My Grandchildren

PREFACE

This study was concerned with the effectiveness of two instructional modes on the achievement level of selected fourth grade students. The primary objective was to compare whole class instruction and an individualized mode of instruction (UNIPAC). A social studies unit concerned with global studies, which was developed by the researcher, was used as subject matter for each mode.

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CHAPTER I

INTRODUCTION

In recent years, teachers in elementary schools have attempted to use more effective techniques for coping with individual differences. Although efforts to resolve the problems arising from differences among learners have been a part of the American educational scene for more than one hundred years, increased emphasis on individual differences became more prevalent in the 1960's. This increased emphasis has been influenced by several developments. Among these are:

1. Broadened knowledge of student learning styles, abilities and states of learning; and

2. Recognition that the educational need of diverse student populations must be met.

Continuous emphasis on individual differences has expanded the choices teachers must make to ensure student mastery of concepts and skills. Teachers must not only select appropriate instructional objectives, appropriate instructional materials, appropriate instructional strategies, but must also select appropriate instructional modes. Hunter (1979) states:

> Teaching is now defined as a process of making and implementing decisions, before, during, and after instruction, to increase the probability of learning. If what a teacher does is consonant with what is now known about cause-effect relationships in learning, and if that teacher's decision and action reflect awareness of the current state of the learner and the present environment, then learning will predictably increase (p. 62).

Striving to provide alternatives for students who learn in different ways is an excellent move toward obtaining increased academic achievement. Once it is recognized that, under specified conditions, some children are able to progress independently toward clearly stated educational objectives, new patterns of organizing instructional environments and groups are needed. To provide students with opportunities for teacher-directed group learning, educators are presently experimenting with varied ways of reorganizing instructional units.

Purpose of Study

Teachers and administrators need to know what instructional modes are most effective for students in a variety of learning settings. Therefore, this study was designed to investigate the effectiveness of two different modes of instruction on the achievement of selected students completing a social studies unit.

The study compared the relative effectiveness of two modes of instruction (whole class and individualized) for content mastery of one topic (global studies) at one grade level (fourth). Like individual differences among students, the possible variations in learning modes are infinite. Some students appear to learn better by teacher to whole class, teacher to small group, teacher to individual student, student to whole class, student to small group, student to student, and student to materials. The choice of an instructional mode should depend on the type of student being taught as well as the educational outcomes that are to be obtained.

Some educators suggest that the selection of instructional modes is not enough. A teacher must select an appropriate teacher style, which consists of the teacher's personal behavior and media technologies chosen to deliver and receive information. A teaching style should provide within its realm appropriate instructional materials so that students acquire increasing competence in various instructional modes. Teaching that will be effective requires that teachers continually assess and adopt to students.

This researcher chose to compare the traditional whole class instructional mode to an individualized mode, a learning package known as the UNIPAC.

Sample

The sample consisted of ten elementary schools, yielding 20 fourth grade classes. The students were from a metropolitan school district (Oklahoma City Public Schools). The schools were randomly selected from 56 elementary schools in the district to participate in the study. The total population consisted of 400 fourth grade students, 200 students in the control group and 200 in the experimental group. The following question was considered: Are there differences in achievement between treatment groups?

Hypothesis

This study was designed to test the following null hypothesis:

H_o: There is no significant difference between achievement test scores of fourth grade pupils who are taught with a whole class mode and an individual mode of instruction.

In order to test the hypothesis of this study, definitions for the major variables were necessary. The following definitions were used:

Global Studies: A social studies unit with summaries on the earth's population and topography and general information about six countries: China, United States, USSR, Mexico, France, and Egypt concerning the countries' population, languages, customs, climates, economics, dress, resources, governments, and religion.

Instructional Modes: Methods of presenting information; for example, teacher to whole class or teacher to small group.

Whole Class Instruction: An instructional mode consisting of the teacher presenting information in lectures and demonstrations and then following up with recitations or practice exercises in which the students have an opportunity to make responses and get corrective feedback.

UNIPAC: A social studies learning package with a main idea, objectives, self-evaluations, and quest activities; designed to be used as an individualized mode of instruction.

Effectiveness: Derived from a comparison of the two groups' test scores from the "knowledge" portion of the fourth grade test "Other Nations, Other People."

Learning Styles: These are characteristics of cognitive, affective, and physiological behavior that serve as indicators of how learners perceive, interact, and respond to learning environment.

Teaching Styles: These consist of teacher's personal behavior and the media used to transmit data to receive it from the learner.

Assumptions

For the purpose of this study, the following assumptions were made:

1. That the two treatment groups were selected without bias.

2. That assignment of treatment to one group or the other was random and under the experimenter's control.

3. That there was a uniform regression between experimental and control groups.

Limitations of the Study

The following were regarded as limitations of this study:

1. This study was limited to ten elementary schools in a large independent school district.

2. The findings can be generalized beyond the fourth grade students in these ten elementary schools only with caution.

3. The findings are concerned only with knowledge as measured by "Other Nations, Other Peoples" fourth grade test.

CHAPTER II

BACKGROUND INFORMATION

This chapter is divided into four sections. Section one consists of a review of the literature related to the teacher as a decision maker. The second section consists of a review of the literature related to instructional modes. The third section describes the purpose and results of the pilot study. The fourth section includes a statement of the research question as it relates to the information reported in the first three sections.

Teacher as Decision Maker

In 1937 John Dewey wrote:

> The democratic principle requires that every teacher should have some regular and organic way in which he can, directly or through representatives, democratically chosen, participate in the formation of the controlling aims, methods, and materials of the school of which he is a part (p. 460).

Crockenberg and Clark (1979) state that:

> In 1907 Ella Flagg Young argued in her presidential address to the National Education Association that 'the isolation of the great body of teachers from the administration of the school must be overcome' and that teachers will be 'stronger in their work when they have some voice in the planning of the great issues committed to their hands'(p. 115).

The February, 1913, issue of the American Teacher, which later became the official journal of the American Federation of Teachers published a "Call to Organize" that argued similarily:

> Teachers do the everyday work of teaching and understand

> the conditions necessary for better training . . . they should have a voice and a vote in the determination of education policies . . . and share in administration of the affairs of their school (p. 34).

Current practices relative to teachers as decision makers have evolved to the degree that if one supports this premise, professional preparation for decision making must be a part of teacher education.

Hunter (1979) cites four components necessary for professional development.

1. Identification of the decisions a teacher must make,
2. Inservice which enables the teacher to combine science and art in teaching,
3. Films and tapes which provide opportunities to predictably 'see' how it looks in the classroom, and
4. A diagnostic-prescriptive instrument which provides knowledge of results in professional performance (p. 67).

If one should examine the suggested goals and objectives of preservice and inservice professional education during this educational era, the components that Hunter cited above are evident in one form or another. However, since professional competence ultimately must be measured in terms of student achievement, appropriate selection of instructional modes must be viewed as a vital part of the decision making process.

Instructional Modes

Instructional modes appear to be the vital means by which each day's learnings are conveyed to students. Therefore, educators often describe a mode simply as an orderly procedure to obtain a desired end; however, it is more than that. Modes in education would be totally unrealistic if the need of the student and the particular scope of the course content were ignored. Just as a traveler's mode of travel would be determined by his/her personal preference and resources, so also a teacher's choice of

modes in education is contingent on many factors. Some of these factors are:

1. The ability of the teacher to use a particular mode,
2. The capacity of the class to comprehend by that mode, and
3. The adaptability of the subject matter to that specific mode.

These are crucial considerations that a teacher must evaluate to determine the mode he/she will use.

According to Collins (1965) teaching constitutes many different modes and procedures. These may be general, as well as specific, in nature. For example, teacher to whole class, teacher to small group or teacher to individual student can be viewed as general instructional modes. Strategies such as lectures, discussions, demonstrations, use of various media (maps, films, filmstrips, and pictures), oral reading, research, and forms of dramatization could represent specific procedures that enhance learning.

The selection of one or more modes of transmitting knowledge from one person to another is controlled by the person who has that knowledge. Culture acts as a determining role in the selection of the various modes of this transaction. As culture is accumulated and as new political, economic, and social issues arise, it becomes increasingly necessary for man to devise more and better means of transmitting culture and dealing effectively with the issues by both formal and informal means.

Since the early 1960's the momentum of change in education has been steadily increasing and, today, partially in response to strong pressures from students, the whole framework of educational goals, curriculum, methods, and evaluation is undergoing "instant" revision. This increasing momentum forces teachers to not only make choices from among the broad categories of instructional modes such as:

1. Teacher to whole class,
2. Teacher to small group,
3. Teacher to individual student,
4. Student to whole class,
5. Student to small group,
6. Student to student,
7. Materials to whole class,
8. Materials to small group,
9. Materials to individual,
10. Media to whole group,
11. Media to small group,
12. Media to individual,
13. Resource person to whole class,
14. Resource person to small group, and
15. Resource person to individual,

but they must also select appropriate specific modes and procedures that will heighten learning for all students. In order for teachers to heighten learning for all students, a source of adequate information as to the effectiveness of each mode should be available. Because of the many possible instructional modes, this researcher chose only to compare the effectiveness of one form of whole class instruction to one form of individualized instruction (UNIPAC).

Whole Class Instruction

One important implication research has supported is that the choice of a teaching mode should depend on the educational objectives a teacher wants to obtain. Research also suggests that the effectiveness of the mode

of instruction may depend on the type of student being taught. For example, Wright and Ducette (1976) found that students who had an internal locus of control felt they had personal control over their successes and failures and achieved more under open approaches than under direct approaches. Students who had an external locus of control felt that their successes and failures were due to fate, luck, or other forces outside their control and achieved equally well under direct as under open approaches.

According to Rosenshine (1979) direct instruction or traditional approaches have the following charactertistics: an academic focus, a teacher-centered focus, little student choice of activity, use of large groups rather than small groups for instruction, and use of factual questions and controlled practice in instruction.

A teacher sets and articulates the learning goals, actively assesses student progress, and frequently makes class presentations illustrating how to do assigned work. During an interview by Brandt (1976) with James H. Block on Mastery Learning, Block states:

> My personal predilection is toward the group-based, teacher-paced model. I can see no reason to completely overhaul the organizational nature of schools when we know that group-based, teacher-paced instruction can function very effectively as a beginning point for a mastery strategy (p. 584).

If one would consider the whole class instruction as a group-based, teacher-paced model, then it would be highly effective. Block (1971, p. 584) also shares this insight: "Learning in schools is a social enterprise, and the height of asocial learning is a student set away in his carrel where he doesn't see anyone else."

In summary, whole class instruction allows learning to take place in a congenial academic atmosphere. The major goal is to move the student through a sequenced set of materials or tasks. More often than not,

the materials are common across classrooms and have a relatively strong congruence with the tasks on achievement tests.

Individualized Instruction

In an educational trend that reflects a social trend, emphasis is shifting from concern with group norms toward concern for individuals, including their personal experiences. Though this trend is readily perceptible, it is not equally clear just what form this individualization of teaching and learning should take, nor in what context it is more appropriately used. Interestingly enough, the very individuality of education tends to make educators view the subject of individualized learning from their unique perspectives. As a natural consequence there has been proliferation of approaches to individualize instruction, of which the UNIPAC is one. Some other approaches are Individually Guided Education (IGE), Individually Prescribed Instruction (IPI), and Program of Learning in Accordance with Needs (PLAN).

Individually Guided Education. Klausemier (1977) described Individually Guided Education as having similar goals to Individually Prescribed Instruction and Program of Learning in Accordance with Needs. However, there is a major difference in the programs. Individually Guided Education is a total system of schooling, having seven interrelated and clearly described components; it is a true alternative to age-grade schooling, departmentalized schooling, open education, and other forms of schooling. Far more fundamental changes in current schooling, teacher education, and relationship among educational agencies within a state are required by IGE than either IPI or PLAN.

There are seven components within the IGE school. They are as follows:

1. The multiunit organizational administrative arrangements,
2. A model of instructional programming for the individual student,
3. Evaluation for educational decision making,
4. Compatible curriculum materials,
5. A program of home-school-community relations,
6. Facilitative environment, and
7. Continuing research and development.

Klausemier (1977) stated that three evaluation reports indicated educational achievements of students rose when the multiunit organizational administrative arrangements and instructional programming for the individual student were implemented properly. Specifically, Klausemier (1977) states that:

> The achievement of primary-aged children after three years in IGE schools of Jamesville, Wisconsin, were compared with the achievements of children in non-IGE schools for the same city. In reading, the percentile rank for the students in their third year of IGE schooling was 59, in the control school, 48; in mathematics the percentile ranks were 46 for the IGE school and 35 for the non-IGE schools, in spelling the ranks were 48 and 42, again favoring the IGE schools.
>
> In Windsor, Connecticut, eight year old students in their third year in IGE schools were given a reading achievement test and aptitude test. The aptitude test was used to derive an expected score for each child, and these expected reading scores were compared with the actual score. The results were that 42 percent of students achieved above expectancy and only 8 percent below expectancy.
>
> The 111th Street Elementary School is in the Watts area of Los Angeles, California and through 1975-76 enrolled black students almost exclusively. A systematic attempt at individualizing instruction in reading began in 1970-71. In 1971-72, IGE was started and both instructional programming for the individual student in reading and organizational-administrative arrangements were implemented. Remarkable gains in achievement, as determined from study of annual administration of educational achievement tests, were made (p. 330).

Individually Prescribed Instruction. Individually Prescribed Instruction was developed by Glaser, Balvin, and Lindvall with the cooperation of the University of Pittsburg and the Whitehall Public Schools, suburban Pittsburgh (Weisgerber, 1971). Individually Prescribed Instruction (IPI) consists of planning and conducting with individual students a program of studies that is tailored to their learning needs and to their characteristics as learners. In IPI such parameters of individual differences as rate of learning, amount of practice and, to some extent, preference for mode of instruction have been taken into account.

According to Weisgerber there are distinguishing fundamentals of Individually Prescribed Instruction. They are:

1. It must be based on a carefully sequenced and detailed listing of behaviorally stated instructional objectives.

2. Lesson materials must be geared exactly to the instructional objective and must be such as will permit pupils to proceed quite independently and with a minimum of direct teacher instruction.

3. A basic aspect is a rather detailed provision for diagnosis of pupil skills and abilities and continuous monitoring of pupil progress.

4. A unique feature is its requirement that each pupil's work be guided by written prescriptions prepared to meet his individual needs and interests.

5. There are essential aspects of change in teacher performance such as

    a. Little time in lecturing to a group,

    b. Much time is spent in evaluating the individual pupil's record, and

    c. Much time is spent diagnosing his needs, and preparing individual learning prescriptions for each child.

Most time is spent helping individual pupils and frequent and regular staff conferences are held to discuss individual pupils, to evaluate and adapt materials and procedures, and to make future plans for each child. The success of any type of educational curriculum will rest ultimately on the quality of the experience that the pupils have. Individually Prescribed Instruction is pupil-oriented instruction and differs from other procedures in terms of activities in which pupils are engaged (Weisgerber, 1971).

Process of Learning in Accordance with Needs. Weisgerber and Rahmlow (1971), from a chapter in a book of readings, state:

> PLAN is a system of individualized education built on data-based instructional objectives, learning materials, performance tests, and personalized program of study in social studies, language arts, science and mathematics. The system is adaptive to widely varying school factilities and to school budget. In addition, PLAN emphasizes the counseling and classroom management skills of existing instructional staff.
>
> Instructional objectives are derived from an overall curriculum developed by PLAN staff and teachers from cooperating research and development schools, in consultation with national curriculum authorities. The objectives are then organized into study modules for use by students. Often about five or six objectives constitute a module of study. Ultimately, a program of studies is developed to assist the student in selecting modules appropriate to his needs and interest. At the primary level, objectives tend to be used in an inductive sense and, contrary to the upper grades, are placed at the end of the teaching-learning unit. In PLAN, there are two types of teaching-learning units:
>
> 1. The materials-general teaching-learning unit, which specifies learning activities but generalizes about the materials the student should use in order to accomplish the objectives, and
>
> 2. The materials-specific teaching-learning unit, which specifies activities and the resources a student should use in accomplishing the objectives.
>
> After the student has completed a teaching-learning unit, he is evaluated on his ability to demonstrate mastery of the

> objectives. Evaluation items are written with a view of eliciting relevant performances from the student (p. 36).

According to Flanagan (1972) the PLAN educational system, which was distributed by Westinghouse Learning Corporation, was used by approximately 30,000 students in various school districts throughout the country during the 1971-72 school year. The PLAN system is designed as a tool in the development of an educational program which is effective, relevant and accountable for today's students.

UNIPACS

In a traditional classroom there are many individual differences among the learners. It is usually impossible for the teacher to simultaneously meet all the needs of each individual pupil, so he/she must follow a course that will facilitate individualized learning in the traditional classroom. One way of facilitating more individualized modes is the preparation of prepackaged, individualized learning units that require a minimum of teaching time.

The UNIPAC may be defined as a self-contained set of teaching-learning materials designed to teach concepts. The UNIPAC may be structured for individual and independent learners who are performing at the same general level of instruction. Components of the UNIPAC consist of learnable ideas, skills, or attitudes. Specific learning objectives are listed for the student and stated in behaviorial terms (words or phrases which describe observable enroute or terminal performance). Opportunities for diversified media, materials, and methods are provided for the learner; evaluation through pretest, selftest, and posttest is included so that the learner may measure his/her progress toward the achievement of the objectives.

During a convocation that was held in Garden Grove, California, the crucial need for individualized materials was identified. Prior to this meeting there had been great concern as to why individualized instruction had not been as effective as planned. In order to eliminate what educators felt as a major stumbling block to individualized instruction the Institute for Development of Educational Activities, a project of the Charles E. Kettering Foundation, supported the major task of developing, collecting, and using materials designed for individuals. The major goal of the materials center was to facilitate the development and dissemination of materials suitable for supporting individualized instructional programs.

According to Field and Gardner (1972), the form and elements of the UNIPAC lead to performance, and the application of the UNIPAC process leads to individualization. They say that this process ultimately requires a "conspiracy" with scheduling, administration, space, organization, etc., in order to reach its full effectiveness, but even alone the UNIPAC fosters an irresistible tendency toward quality in education.

In summary, examination of the various approaches to individualization indicates that while there are differences in what these programs' labels represent, it is more useful to consider what they have in common:

1. A reorganization of the curriculum into smaller units of study, often prepackaged according to topic and level of difficulty.

2. A greater mobility of the individual child through different kinds of settings for learning, such as, variations in grouping and in supervision received.

3. A greater dependence on instructional media, remote resources, and learning centers all readily accessible to facilitate independent study.

4. An attempt to evaluate student readiness more personally and to subtest learning experiences which are thought to be individually relevant to such learner.

5. A shift in the role of teacher away from being information sources toward the role of designer of "appropriate" learning tasks.

Examination and comparison of individualized instruction with more traditional instruction or whole class instruction reveal that they differ in the amount of time that the teacher and pupil are in contact. Therefore, for the benefit of this study, it was decided that two instructional modes having sharply contrasting amounts of teacher-pupil interaction would be compared. The content was a unit concerned with global studies.

A whole class mode and UNIPAC were selected because they provide contrast between "traditional" and "non-traditional" modes. They also provided contrast between teacher-directed and student-directed pacing in addition to the contrast between pupil and teacher contact and non-contact.

Pilot Study

The planning for this study involved the conducting of a pilot study. According to Borg (1963), there are several reasons a pilot study is advantageous:

1. It permits a preliminary testing of the hypotheses that leads to testing more precise hypotheses in the main study.

2. It often provides the research worker with ideas, approaches and clues not foreseen prior to the pilot study.

3. It permits a thorough check of the planned statistical and analytical procedures.

4. It greatly reduces the number of treatment errors because unforseen problems revealed in the pilot study may be overcome in redesigning the main study.

5. The pilot study almost always provides enough data for the research worker to make a sound decision on the advisability of going ahead with the main study.

The pilot study was made two months prior to the actual research study. One elementary school provided the fourth grade subjects for the pilot study. The classes were assigned to one of the two instructional modes, that is, an individualized mode of instruction or a whole class instructional mode. The knowledge portion of "Other Nations, Other Peoples" test was administered prior to the treatment and immediately upon completion of the treatment. The "Other Nations, Other Peoples" fourth grade test was developed during a study conducted by the Educational Testing Service, Princeton, New Jersey, for the Institute of International Studies of the United States Office of Education (1974). The test was given as a pretest to establish group equivalency. After the treatment, the test was administered as a posttest to determine if there were differences on the achievement level of the fourth grade students due to treatment.

Table I reveals that there was a difference in pretest and posttest performance in both groups. Since the data indicated a difference in achievement level of a small group of selected fourth grade students, the researcher chose to investigate a much larger group for comparison. The pilot study provided the following information:

1. That class record sheets for recording pretest and scores were needed.

2. That a list of supplementary materials needed to be included on the lesson plan sheet in the teacher's guide.

3. That minor revisions of lessons were needed for clarity.

4. That specific instructional procedures for whole class instruction and individualized instruction needed to be distinct and clearly communicated to teachers.

5. That a much larger study was feasible.

TABLE I

GENERAL DESCRIPTIVE DATA OF EXPERIMENTAL AND CONTROL GROUP

	Pre				Post			
Group	N	$\bar{X}$	SD	Range	N	$\bar{X}$	SD	Range
Whole Class	21	9.61	4.62	0-21	21	17.05	4.07	8-25
Individualized	21	10.24	3.81	3-15	21	12.57	3.81	5-20

The Research Hypothesis

Brophy (1979) cites several large scale field correlational studies that have been conducted at various elementary grade levels. These studies varied in type of teachers and students included and the kinds of variables addressed and modes used, but there was sufficient overlap and replication to provide dependable knowledge about relationships between teacher behavior and student learning of basic skills in the elementary grades. Brophy combined these studies in clusters that supported several

generalizations relative to teacher behavior and student learning.

The cluster that supports the hypothesis of this pilot study deals with various elements of direct instruction. Brophy (1979) says:

> First, studies of general approaches to instruction consistently reveal that students taught with a structured curriculum do better than those taught with individualized or discovery learning approaches, and those who received more instruction directly from the teacher do better than those expected to learn on their own or from one another.
>
> The instruction that seems most efficient involves the teacher with the whole class (or with small groups in the early grades). Presenting information in lecture/demonstrations and then folowing up with recitations or practice exercises in which the students get opportunities to make responses and get correct feedback (p. 34).

There were differences between the achievement levels of the fourth grade students taught with the whole class instruction compared to those fourth grade students who received individualized, self paced instruction. The result of the pilot study support Brophy's (1979) generalizations that students who receive more instruction directly from the teacher do better than those left to learn on their own. Thus, the research hypothesis for the study reported here was as follows: The mean achievement scores of fourth grade students who receive instruction on a global studies unit under a whole class mode will exceed the mean achievement scores of students under an individualized mode.

CHAPTER III

DESIGN AND METHODOLOGY

Introduction

This chapter includes a description of the experimental design for study, including the sampling procedures and the descriptions of treatments. It also includes descriptions of the instrumentation and treatment of data.

Design of Study

The pretest-posttest nonequivalent control group design, which is quasi-experimental, was used for this study. Campbell and Stanley (1963) state that this design:

> . . . is one of the most widespread experimental designs in educational research, involving an experimental groups and a control group, both given a pretest and a posttest, but in which the control group and the experimental group do not have pre-experimental sampling equivalence. Rather, the groups constitute naturally assembled collectives, such as classrooms, as similar as availability permits, but yet not so similar that one can dispense with the pretest. The assignment of X to one group or the other is assumed to be random and under the experimenter's control (p. 29).

The research design is represented by this model:

$$\begin{array}{c} O_1 \ X_a \ O_2 \\ \hline O_1 \ X_b \ O_2 \end{array}$$

In the model O_1 represents the pretest, O_2 the posttest, X_a one treatment, and X_b the other treatment.

The independent variable was mode of instruction. The dependent variable was achievement as measured by the "knowledge" portion of the "Other Nations, Other Peoples" fourth grade test.

Sample

The population for this study was randomly drawn from a metropolitan school district (Oklahoma City Public Schools) consisting of 57 elementary schools. Since it was not feasible for the researcher to list all of the individuals who were potential subjects, a stratified sampling procedure was used. A map of the Oklahoma City Public School district was divided into areas. Five areas were identified. The areas were northeast, northwest, inner city, southeast, and southwest. The name of each school was placed in containers labeled for each area. Properly shaken, names of two schools were pulled from the containers. The schools were contacted. If there were two fourth grade classes in the selected schools and the schools chose to participate, a coin was tossed to determine which class would serve as the whole-class group and individualized group. A teacher made the call for "heads or tails." If the coin flipped on "heads," that class was considered the whole-class group. The other class was considered the individualized group. The classroom teacher taught accordingly. Ten schools were selected with 400 fourth grade students and 20 teachers participating in the study. Two hundred students received whole class instruction and 200 students received individualized instruction.

Instrumentation

The "Other Nations, Other People" test was developed by Lastma in

1974 for a study conducted by Educational Testing Service, Princeton, New Jersey, for the Institute of International Studies for the United States Office of Education. The "knowledge" portion of the fourth grade test was used as both a pretest and a posttest. The portion of the "Other Nations, Other Peoples" test contains 26 multiple choice items. This test was designed to measure student knowledge and understanding of the earth's population, topography, customs, dress, government, economics, language, religion, and resources of France, United States, Mexico, USSR, China, and Egypt. Each student's response was scored as one point, so that the maximum score was 26.

The developers of the "Other Nations, Other Peoples" test did not compute internal consistency reliabilities for the collection of knowledge questions. Their results were reported on an item-by-item basis and consequently did not address the issue of reliability of a total score. The researcher established a coefficient of reliability, using information from a sample of posttest results. The Kuder Richardson (formula 20) coefficient was 0.76. The same observation applies to the question of validity. Each item was dealt with separately. The instrument did have face validity and curricular validity for its use in this study.

Experimental Treatment

The researcher held orientation sessions with the participating teachers two weeks before the study began. During these sessions the two instructional modes to be used were explained. Each teacher was given a guide for the global studies UNIPAC for each fourth grade student. The global studied UNIPAC and teacher's guide were developed by

the researcher. Examples of teacher's guide are included as Appendix D.

The teacher's guide, which was used by teachers using the whole class mode and individualized mode, was organized in sequential order of lessons presentation. Specific instructions were given for use of the guide for both modes of instruction relative to student materials. At the beginning of each lesson, the objective was listed, and an idea for introducing each lesson utilizing the whole class and individualized mode.

In addition to explaining the teacher's guide and answering questions about the UNIPAC, directions for administering the pretest and posttest were given. Since the same test would be used for both pretest and post-test, the rationale for this decision was given at that time.

Each teacher in the study planned for 30 minutes of global studies instructional time three days per week for three weeks. The UNIPAC was divided into seven lessons to be taught within the three week period.

The pretest, which took approximately 30 minutes, was given during the last week of April, 1980. This allowed the researcher an opportunity to collect the pretest from all teachers before the instruction began.

UNIPAC treatment began May, 1980, and continued for three weeks in the ten schools. Each teacher used the same UNIPAC materials; however, the instructional modes used were either whole class or individualized.

During the whole class instruction, the teacher introduced the materials, presented the information through various media and conducted discussions with the entire class. After each discussion, students were given prepared worksheets for practice. Activities on the worksheet varied, depending on the lesson. Following each lesson a written self-evaluation was completed by students.

During the individualized, self-pacing instruction, lessons were assigned and students were directed to the materials. Each student read the directions and did the assignments. The worksheet activities varied, depending on the content of the lesson. All of the activities included a self-checking feature. At the end of each lesson, students completed the same self-evaluation as students under whole class instruction. At the end of the three-week instructional period, students were given the posttest, again using the "knowledge" portion of the "Other Nations, Other Peoples" fourth grade test.

Data Treatment

Teachers administered the posttest at the end of the study and recorded the scores for each student. The researcher tabulated pretest and posttest scores for each student. They can be found in Appendix C. The statistical significance of the difference between the mean scores of the two groups was established through the use of analysis of covariance. Pretest scores were used as the covariate in this analysis.

CHAPTER IV

RESULTS

Introduction

The major concern of this quasi-experimental study was to determine the effectiveness of two modes of instruction for a fourth grade unit on global studies. These modes were whole class instruction and a form of individualized instruction.

Four hundred fourth grade students from ten elementary schools of the Oklahoma City school district took part in this study. Twenty teachers consented to participate. All subjects were administered the "knowledge" portion of "Other Nations, Other Peoples" fourth grade test preceding treatment. Two hundred students received the whole class instruction from ten teachers utilizing the UNIPAC outline. Two hundred students received the individualized instruction from ten teachers also utilizing the UNIPAC. Participating students completed the same instrument as a posttest. There were four weeks between the first and second administration of tests.

Design of Study

The experimenter administered the same test two times with the treatments intervening between testings. The design of the study is shown in the following diagram:

$$\frac{O_1 \; X_a \; O_2}{O_1 \; X_b \; O_2}$$

Since no known bias existed in the selection of the sample, scores of individual students were used in the analysis. Analysis of covariance was used to test the significance of the difference between adjusted mean scores from the two treatment groups.

Hypothesis

The research hypothesis for this study was: There is a significant difference between the achievement scores of students who received whole class instruction and those who received individualized instruction.

The statistical analysis was designed to test the null hypothesis: There is no significant difference between the achievement scores of students who receive whole class instruction and those who receive individualized instruction.

Data

Table II provides the general descriptive statistics for experimental and control group performance on the "knowledge" portion of fourth grade test. Table III presents data on the computerized analyses.

Table II reveals that both the groups improved as a result of the treatment. The whole class group improved 6.38 points relative to the unadjusted mean scores. The individualized group's improvement was four points relative to the unadjusted mean scores. It is obvious that the superiority of the whole class group was present in posttest performance.

Since it is possible that pretest scores had an effect on posttest scores, an analysis of covariance was performed. The analysis of

TABLE II

GENERAL DESCRIPTIVE DATA OF EXPERIMENTAL AND CONTROL GROUP

Group	Pre			Post			
	$\bar{X}$	SD	Range	$\bar{X}$	SD	Range	$\bar{X}_{adj}$
Whole Class	11.73	4.50	1-24	18.11	5.17	4-26	17.64
Individualized	10.23	3.65	3-21	14.23	5.01	3-26	15.50

TABLE III

SUMMARY OF THE ANALYSIS OF COVARIANCE

Source	SS	df	Ms	F
Pretest	3,174.04	1	3,174.04	163.11
Groups	620.81	1	620.81	31.90
Residual	7,725.32	397	19.46	
Total	11,520.17	399	28.87	

F_{95} (1,200) = 3.89

covariance is designed to control the effects of possible covariates or a criterion variable, on the posttest scores. This would make it possible to determine if there is a significant difference in the posttest scores independent of the pretest scores.

A computerized analysis of covariance was performed using the SPSS computer package. Pretest scores were used as the covariate. The difference between adjusted means was 2.14 in favor at the whole class group. Table III contains relevant data on the computerized analysis.

An F value of 3.89 is statistically significant at the .05 point. Thus, the results of the computer performed analysis of covariance indicate that the performance of the two groups on the posttest was significantly different. Therefore, the null hypothesis was rejected and the alternative was accepted.

CHAPTER V

SUMMARY, FINDINGS, DISCUSSION, AND RECOMMENDATIONS

Introduction

This study was conducted to compare the effectiveness of a form of whole class instruction and a form of individualized instruction using the same outline of content in both modes for content mastery of one topic (global studies) at one grade level (fourth). The whole class instruction utilized teachers who taught using the content of the UNIPAC, followed by class discussion, lesson activities, and tests. The individualized instruction utilized the teacher to give assignments and allowed students to read the UNIPAC lessons and to do all follow-up activities at each student's pace with little or no assistance from the teacher.

A pilot study was conducted during the spring semester of 1980 at an Oklahoma City elementary school. The purpose of the pilot study was to give trial to the research design and data analysis. The major finding was that there was a significant difference in favor of those students who were taught under whole class instruction rather than individualized instruction. The study also provided information for revisions and additions for the UNIPAC contents and teacher's guide.

The experimental study took place during the spring semester of 1980 in ten Oklahoma City elementary schools. Four hundred fourth grade students and 20 teachers participated in the study. The "knowledge" portion

of the "Other Nations, Other Peoples" fourth grade tests was administered as both the pretest and posttest. Ten teachers used the whole class instructional mode and ten teachers used the individualized instructional mode for a period of three weeks. The major statistical technique used was the analysis of covariance. The results of the computer performed analysis of covariance indicated that the performance of the two groups in the posttest was significantly different in favor of the whole class group. Therefore, the null hypothesis was rejected and the alternate hypothesis was accepted.

Findings and Discussion

The underlying purpose of this study was to determine whether there was a significant difference in two instructional modes utilized by classroom teachers with selected fourth grade students. Based on this study, it was concluded that there is a significant difference between those taught the same content from the social studies by whole class and individualized modes.

It might be interesting to speculate about the implications of the results of the study. The whole class mode appears to be superior to the individualized mode. It is possible that results were affected by differential abilities of the teachers to employ the teaching modes under study effectively. It is quite possible that routine school procedures caused individual teachers to vary in the nature of the classroom instruction. The time of the school year that the study was done could be significant. It would be interesting to perform the study at the beginning of the school year rather than the end to see if, indeed, this would yield a greater difference.

Educators perhaps should give some attention to the match between the testing instrument and the particular mode used for instruction. Specifically any teacher using a testing instrument should attempt to determine if it is sensitive to certain teaching modes. Although gains shown for the control group were evident, one might extend the instructional time allocated for the present study to more than three weeks for future study. In addition to supporting the data of other researchers who focused mainly on basic skills, the writer has highlighted a content area in which the applications of basic skills are paramount. It must also be concluded that the mystique of individualized instruction does not always transfer to the teaching of all content areas and that the behavior of the teacher is the key component in the learning process.

Recommendations

Findings and recommendations of this study support the following recommendations:

1. That a study be made of various types and sizes of school systems regarding whole class and individualized instructional modes.

2. That a much larger sample of teachers be used in a replicated study.

3. That similar studies be completed in other academic areas.

4. That similar studies be completed that focus on affective objectives.

5. That other treatments that incorporate features of both modes be studied.

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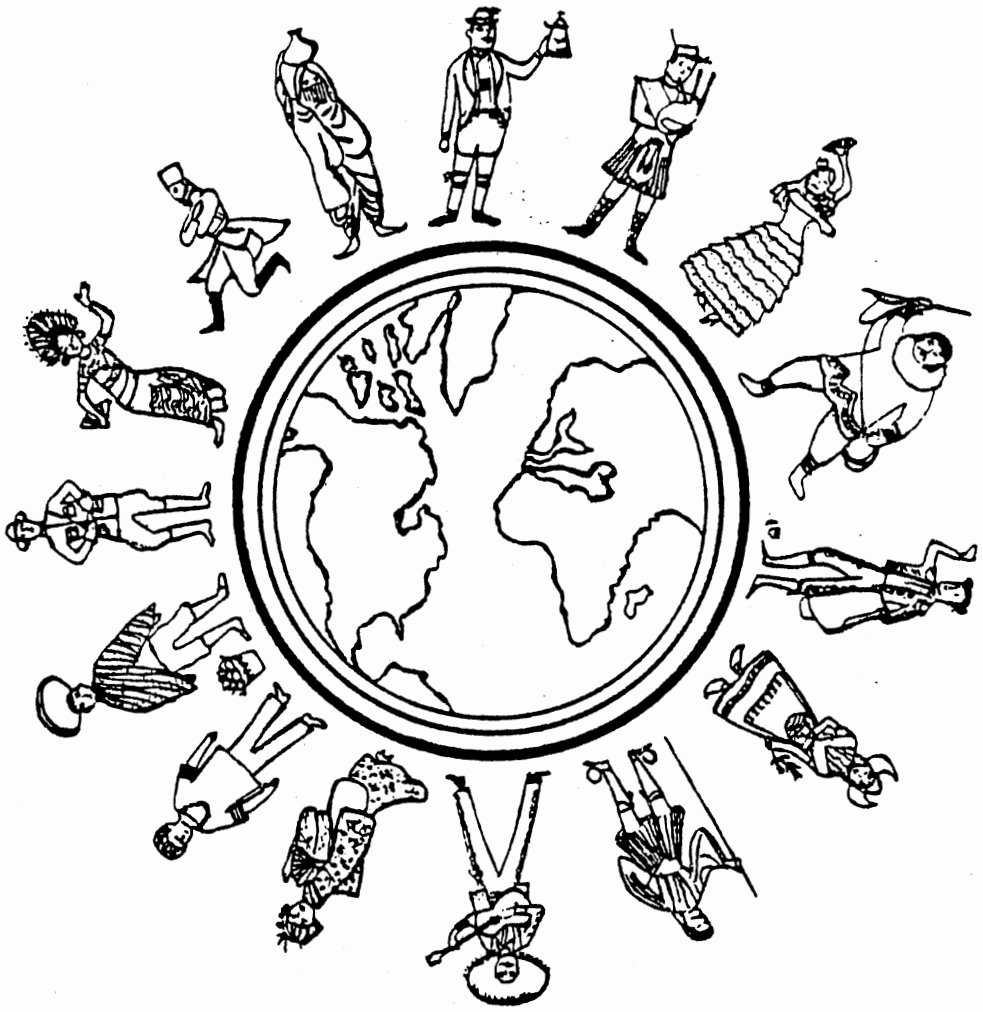
APPENDIX A

"OTHER NATIONS, OTHER PEOPLES" FOURTH GRADE TEST



OTHER NATIONS OTHER PEOPLES

KNOWLEDGE TEST

GRADE 4

A Study Conducted by Educational Testing Service, Princeton, N.J. for the Institute of International Studies of the United States Office of Education.

10/4

Name _____

School _____

EXAMPLE:

The United States is located in:

(A) Europe.

(B) South America.

(C) North America.

(D) Asia.

1. The people in England speak the same language as the people in

   (A) China
   (B) France
   (C) Russia
   (D) The United States

2. Which two countries have sent rockets to the moon?

   (A) The United States and Russia
   (B) The United States and China
   (C) Russia and France
   (D) China and France

3. Which of these countries has the warmest climate?

   (A) Canada
   (B) England
   (C) Mexico
   (D) China

4. Which country has a communist government?

   (A) The United States
   (B) England
   (C) Mexico
   (D) Russia

5. The United States has just started to be more friendly with which country?

   (A) England
   (B) France
   (C) Mexico
   (D) China

6. Which country is in both Europe and Asia?

   (A) China
   (B) Russia
   (C) India
   (D) Poland

7. Which is an Arab country?

   (A) Egypt
   (B) Mexico
   (C) Israel
   (D) India

8. Which country has the most people?

   (A) Russia
   (B) The United States
   (C) Canada
   (D) China

See the map on page 41. EXAMPLE: Which number is on Australia?

(A) 15 (B) 16 (C) 17 (D) 18

9. Which number is on the United States?

   (A) 1
   (B) 2
   (C) 3
   (D) 4

10. Which number is on Mexico?

    (A) 2
    (B) 3
    (C) 4
    (D) 5

11. Which number is on France?

    (A) 6
    (B) 7
    (C) 8
    (D) 9

12. Which number is on Russia?

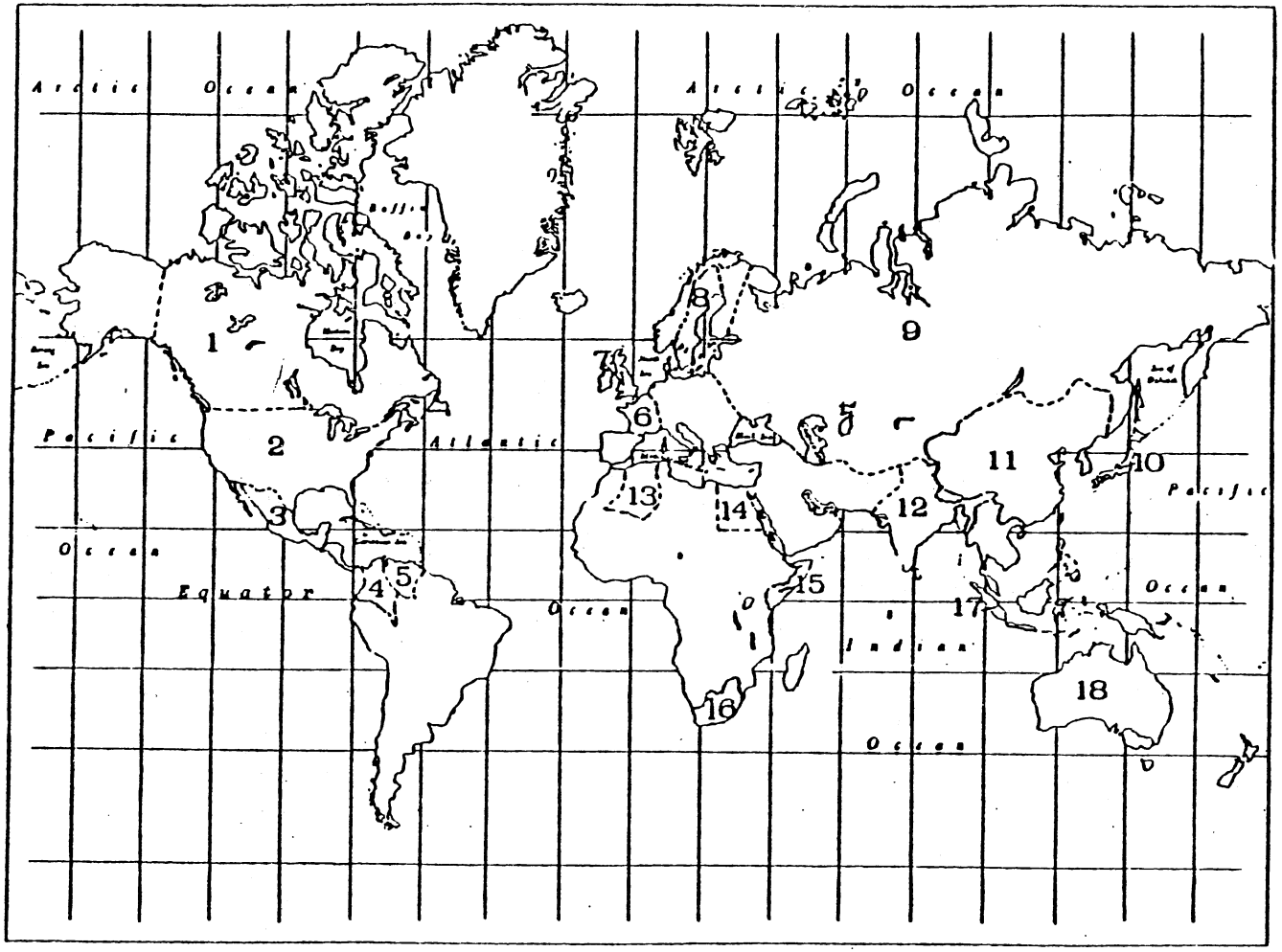
    (A) 8
    (B) 9
    (C) 10
    (D) 11

13. Which number is on China?

    (A) 9
    (B) 10
    (C) 11
    (D) 12

14. Which number is on Egypt?

    (A) 12
    (B) 13
    (C) 14
    (D) 15



15. Who makes the laws of the United States?

(A) The United Nations
(B) The Congress
(C) The President
(D) The Supreme Court

16. How does the United States government get most of its money?

(A) Getting interest from banks
(b) Borrowing from other countries
(C) Selling to other countries
(D) Collecting taxes

17. The money used in Mexico is called the

(A) Peso
(B) Dollar
(C) Pound
(D) Yen

18. Most of the people in China work as

(A) Government workers
(B) Factory workers
(C) Farmers
(D) Teachers

19. The primary means of transportation within Chinese cities today is

(A) Automobile
(B) Horse
(C) Bus
(D) Bicycle

20. What is a major product of France?

(A) Oil
(B) Perfume
(C) Cotton
(D) Sugar

21. Most of the land area in Egypt is made up of

(A) Deserts
(B) Mountains
(C) River valleys
(D) Plains

22. What is an important product of Egypt?

(A) Rubber
(B) Cotton
(C) Lumber
(D) Corn

23. Most of the world is made up of

(A) Mountains
(B) Plains
(C) Lakes
(D) Oceans

24. To work for peace in the world, most countries belong to the

(A) United States
(B) United Nations
(C) United Fund
(D) United Kingdom

25. All groups of people in the world have a

(A) Religion
(B) Language
(C) School system
(D) Transportation system

26. About how many people live in the world today?

(A) 350 thousand
(B) 350 million
(C) 3.5 billion
(D) 35 billion

APPENDIX B

RAW DATA OF PILOT STUDY

TABLE IV

RAW DATA OF PILOT STUDY

Individualized Instruction: Pre- and Posttest						Whole Class Instruction: Pre- and Posttest					
Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post
1.	10	18	11.	4	7	1.	8	18	11.	9	19
2.	8	16	12.	8	10	2.	12	15	12.	10	21
3.	3	7	13.	14	12	3.	8	13	13.	11	16
4.	17	20	14.	9	5	4.	13	20	14.	9	14
5.	12	15	15.	7	10	5.	7	14	15.	9	13
6.	15	14	16.	10	15	6.	5	13	16.	5	15
7.	15	16	17.	5	9	7.	0	8	17.	12	18
8.	10	14	18.	6	9	8.	21	23	18.	16	25
9.	13	14	19.	13	10	9.	3	15	19.	5	19
10.	14	17	20.	13	13	10.	12	15	20.	13	21
			21.	9	13				21.	14	23

APPENDIX C

RAW DATA OF EXPERIMENTAL STUDY

TABLE V

RAW DATA OF EXPERIMENTAL STUDY (PRETEST AND POSTTEST SCORES)

Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post	Student	Pre	Post
Whole Class Instruction																										
1.	12	10	21.	14	22	41.	19	25	61.	6	11	81.	10	25	101.	23	19	121.	9	25	141.	20	24	161.	13	17	181.	8	17
2.	11	6	22.	14	21	42.	17	20	62.	8	16	82.	10	25	102.	1	4	122.	11	24	142.	20	25	162.	17	25	182.	21	24
3.	5	13	23.	6	12	43.	15	21	63.	17	26	83.	17	20	103.	11	19	123.	15	20	143.	17	24	163.	10	16	183.	13	16
4.	12	17	24.	10	11	44.	3	20	64.	5	14	84.	12	25	104.	24	20	124.	10	25	144.	11	19	164.	6	16	184.	18	18
5.	8	6	25.	12	15	45.	12	24	65.	10	24	85.	18	24	105.	18	19	125.	15	20	145.	22	24	165.	12	10	185.	16	24
6.	13	11	26.	14	23	46.	2	20	66.	17	26	86.	14	22	106.	2	5	126.	11	22	146.	11	21	166.	10	19	186.	8	19
7.	12	14	27.	10	16	47.	11	26	67.	10	23	87.	12	14	107.	14	15	127.	6	19	147.	6	21	167.	4	10	187.	10	15
8.	15	14	28.	12	16	48.	11	26	68.	16	26	88.	9	20	108.	15	17	128.	8	21	148.	4	16	168.	7	12	188.	12	18
9.	6	10	29.	11	11	49.	12	25	69.	20	26	89.	8	20	109.	14	16	129.	18	15	149.	7	6	169.	14	19	189.	7	13
10.	13	11	30.	10	16	50.	9	18	70.	14	23	90.	5	10	110.	10	15	130.	6	24	150.	16	19	170.	10	14	190.	18	23
11.	21	15	31.	13	26	51.	8	19	71.	19	24	91.	10	15	111.	11	15	131.	18	24	151.	11	20	171.	9	14	191.	14	23
12.	12	21	32.	11	19	52.	5	14	72.	9	22	92.	17	19	112.	4	16	132.	6	23	152.	7	7	172.	16	18	192.	13	24
13.	13	15	33.	15	13	53.	8	18	73.	17	26	93.	15	20	113.	12	15	133.	6	23	153.	10	17	173.	14	21	193.	7	13
14.	2	15	34.	17	22	54.	7	19	74.	18	24	94.	14	16	114.	10	20	134.	16	20	154.	5	6	174.	15	20	194.	14	16
15.	13	10	35.	7	18	55.	5	18	75.	10	18	95.	16	24	115.	12	16	135.	14	17	155.	8	20	175.	17	19	195.	7	14
16.	12	16	36.	21	24	56.	6	13	76.	15	23	96.	14	12	116.	4	6	136.	8	21	156.	12	15	176.	14	23	196.	11	20
17.	12	14	37.	11	21	57.	5	18	77.	16	22	97.	8	18	117.	6	25	137.	14	12	157.	14	18	177.	14	24	197.	15	21
18.	7	6	38.	11	21	58.	15	16	78.	12	15	98.	7	14	118.	12	20	138.	3	21	158.	9	18	178.	12	17	198.	13	19
19.	15	3	39.	15	23	59.	15	26	79.	13	24	99.	10	14	119.	12	15	139.	10	21	159.	11	14	179.	16	17	199.	15	20
20.	8	13	40.	6	12	60.	5	10	80.	9	25	100.	9	10	120.	11	15	140.	16	21	160.	14	20	180.	15	20	200.	17	19
Individualized Instruction																										
1.	8	18	21.	7	10	41.	4	4	61.	7	23	81.	7	7	101.	7	17	121.	16	18	141.	7	6	161.	11	9	181.	13	15
2.	6	6	22.	10	11	42.	10	18	62.	7	10	82.	11	15	102.	11	18	122.	13	15	142.	7	13	162.	8	14	182.	13	17
3.	12	9	23.	11	14	43.	9	19	63.	14	17	83.	13	18	103.	11	11	123.	12	11	143.	5	9	163.	8	12	183.	8	12
4.	11	11	24.	12	21	44.	5	22	64.	10	14	84.	9	12	104.	11	17	124.	11	18	144.	4	9	164.	5	11	184.	17	21
5.	13	16	25.	9	23	45.	3	22	65.	13	12	85.	12	19	105.	15	18	125.	10	20	145.	4	13	165.	10	11	185.	16	18
6.	6	9	26.	5	12	46.	10	21	66.	9	15	86.	13	16	106.	14	17	126.	10	9	146.	4	9	166.	14	10	186.	16	22
7.	10	14	27.	7	16	47.	10	25	67.	9	7	87.	11	14	107.	12	7	127.	10	7	147.	8	7	167.	19	14	187.	16	18
8.	9	12	28.	16	23	48.	4	21	68.	4	16	88.	11	13	108.	14	30	128.	10	17	148.	8	7	168.	4	16	188.	14	17
9.	13	18	29.	13	20	49.	5	15	69.	15	10	89.	15	10	109.	7	6	129.	10	12	149.	6	14	169.	19	14	189.	15	20
10.	12	15	30.	16	22	50.	6	21	70.	14	17	90.	9	13	110.	9	17	130.	9	11	150.	10	12	170.	6	7	190.	9	16
11.	6	10	31.	14	21	51.	5	25	71.	12	17	91.	9	5	111.	9	9	131.	9	12	151.	10	12	171.	18	3	191.	15	21
12.	9	13	32.	11	23	52.	4	10	72.	11	16	92.	10	16	112.	9	16	132.	9	14	152.	15	18	172.	12	19	192.	15	16
13.	9	15	33.	8	23	53.	6	24	73.	10	12	93.	13	16	113.	11	14	133.	9	18	153.	9	13	173.	8	11	193.	18	16
14.	8	14	34.	11	17	54.	9	26	74.	6	10	94.	10	6	114.	7	7	134.	8	8	154.	7	8	174.	21	10	194.	16	19
15.	9	16	35.	14	16	55.	5	20	75.	7	10	95.	12	21	115.	15	16	135.	8	13	155.	6	8	175.	8	20	195.	14	16
16.	9	18	36.	12	20	56.	5	20	76.	11	15	96.	13	14	116.	3	11	136.	8	10	156.	6	8	176.	16	18	196.	13	17
17.	10	15	37.	16	21	57.	8	25	77.	9	8	97.	12	18	117.	15	19	137.	8	10	157.	7	8	177.	8	18	197.	11	11
18.	8	10	38.	11	24	58.	10	22	78.	9	8	98.	14	17	118.	12	15	138.	7	7	158.	13	9	178.	20	9	198.	13	18
19.	8	14	39.	16	17	59.	17	26	79.	9	8	99.	14	22	119.	8	21	139.	7	11	159.	7	6	179.	19	22	199.	10	14
20.	8	16	40.	12	12	60.	13	24	80.	6	11	100.	8	15	120.	16	14	140.	7	13	160.	8	11	180.	10	20	200.	8	11

APPENDIX D

EXAMPLES OF LESSON PLANS

WHOLE CLASS INSTRUCTION

SOCIAL STUDIES LESSON PLAN DISCIPLINE: Geography

STUDY PROGRAM: How do geographical areas, cultures, and numbers of people interrelate?

Skills	Organization for Problem Solving	Activities and Materials	Notes
Listening	3-31 Brief overview of study	Pretest	
Following Directions			
Analyzing	4-21 Lesson I People and the Land --U.N. What important facts do we get from this information?	Large group discussion for meaning of each paragraph using parts of filmstrip ("Learning About Continents and Oceans") Large wall maps and globes Continents Oceans Yangtze and Nile Rivers	
	What words do we need to understand the information presented?	Inhabitants Land masses Mountains International Conference	
	What is the U.N.?	Refer to pamphlets 1. Visit the United Nations 2. What is the United Nations 3. United Nations What it is What it does How it does Available: Dictionaries Encyclopedias Answer Self-Evaluation--pages 5 and 27	

INDIVIDUALIZED INSTRUCTION

SOCIAL STUDIES LESSON PLAN DISCIPLINE: Geography

STUDY PROBLEM: How do geographical areas, cultures, and numbers of people interrelate?

Skills	Organization for Problem Solving	Activities and Materials	Notes
Listening	5-1 Brief introduction to self-study	Pretest	
Following Directions	5-3		
Reading	Lesson I	View filmstrip: "Learning About Continents and Oceans" (641322, McGraw-Hill)	
Locating Information	People and the Land U.N.		
Math. Problem Solving	(Read and follow directions)	Read captions and self-answer Available: 1. "Visit the United Nations" 2. "What is the United Nations" 3. "United Nations" "What it is" "What it does" "How it works" Dictionaries, Encyclopedias, Maps, Globes Complete Self-Evaluation--pages 5 and 27	

APPENDIX E

LETTER OF PERMISSION FROM OKLAHOMA CITY

OKLAHOMA CITY PUBLIC SCHOOLS

March 10, 1980

Ms. Earnestine Dews Shaw
1909 N.E. 26th
Oklahoma City, OK 73119

Dear Ms. Shaw,

I am happy to inform you that your request to conduct a study in the Oklahoma City Public Schools has been approved. Members of your screening committee were:

Ms. Alice Houston, Director of Curriculum
Dr. Betty Williams, Director of Elementary Schools
Ms. Barbara Mitchell, Coordinator of Accountability and Planning

Please contact Dr. Betty Williams to make further arrangements for your study. If you have any further questions regarding this matter, please feel free to contact this office. Good luck with your study.

Sincerely,

Maxie Wood

Maxie Wood
Senior Research Associate
Department of Planning, Research, and Evaluation

ekg

900 NORTH KLEIN / OKLAHOMA CITY, OKLAHOMA 73106 / PHONE (405) 236-2661

APPENDIX F

LETTER FROM DR. ROBERT LEESTMA

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
BUREAU OF HIGHER AND CONTINUING EDUCATION
WASHINGTON, D.C. 20202

September 19, 1979

Ms. Earnestine Shaw
K-8 Curriculum Consultant
Oklahoma City Public Schools
900 North Klein
Oklahoma City
Oklahoma 73106

Dear Ms. Shaw:

Dr. Robert Leestma asked me to respond for him to your letter concerning use of the"Other Nations, Other Peoples" test for grade 4. The test is in the public domain and thus you are free to duplicate it. I would suggest that you contact Thomas Barrows at the Educational Testing Service in Princeton, New Jersey.

Sincerely,

Helen R. Wiprud

Helen R. Wiprud
Education Program Specialist

APPENDIX G

LETTER FROM MRS. LOIS G. HARRIS

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000
CABLE-EDUCTESTSVC

DIVISION OF EDUCATIONAL
RESEARCH AND EVALUATION

February 22, 1980

Ms. Earnestine Shaw
Elementary Curriculum Consultant
Lafayette Elementary School
500 S.W. 44th
Oklahoma City, OK

Dear Ms. Shaw:

Enclosed is a photocopy of the "Other Nations, Other Peoples" knowledge test for grade 4. You are certainly free to photocopy all or parts of it as you wish, or you may prefer to have it re-typed for printing.

Since I am not familiar with your test administration design, I have also included a photocopy of the teacher background and interests questionnaire in the event you might find it useful.

We hope we will have been of assistance in your study and in the attainment of your doctoral degree.

With best wishes,

Sincerely,

Lois G. Harris

(Mrs.) Lois G. Harris
Administrative Secretary

Enclosures

VITA 2

Earnestine Dews Shaw

Candidate for the Degree of

Doctor of Education

Thesis: A COMPARATIVE STUDY OF THE EFFECTIVENESS OF TWO INSTRUCTIONAL MODES ON THE ACHIEVEMENT LEVELS OF SELECTED FOURTH GRADE STUDENTS

Major Field: Curriculum and Instruction

Biographical:

Personal Data: Born in Troup, Texas, December 20, 1930, the daughter of Mr. and Mrs. Bennie L. Dews.

Education: Graduated from I. M. Terrell High School, Fort Worth, Texas, in May, 1957; received the Bachelor of Science in Education degree from Central State University, Edmond, Oklahoma, in 1966; received the Master of Education degree from Southeastern Oklahoma State University, Durant, Oklahoma, in 1969; enrolled in the doctoral program at Oklahoma State University in 1977; completed the requirements for the Doctor of Education degree at Oklahoma State University in December, 1982.

Professional Experience: Junior High School Teacher, Oklahoma City Public Schools, 1966-1968; Curriculum Consultant, Oklahoma City Public Schools, 1969-1977; Visiting Professor, Oklahoma State University, 1977-1978; Curriculum Consultant, Oklahoma City Public Schools, 1978-1981; Lead Teacher, Oklahoma City Public Schools, 1981-1982.

Professional Organizations: Member of National Education Association, Oklahoma Education Association, Phi Delta Kappa, Oklahoma Association of Supervision and Curriculum Development, Oklahoma Reading Council, and Sigma Gamma Rho Sorority.