

AN ABSTRACT OF THE THESIS OF

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Title: A Comparison of the Effect of Oral Versus Written Lesson Closure on the Achievement of Seventh and Eighth Grade Students in Social Studies

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This was an experimental study which compared two different instructional methods, oral lesson closure versus written lesson closure, on the achievement of 156 junior high school students in social studies. This study was composed of two duplicate experiments. Experiment I was conducted with 71 seventh grade social studies students at School A, and Experiment II was conducted with 85 eighth grade history students at School B. A pretest posttest control group design was used for both experiments. The control group was given oral closure and the experimental group was given written closure. Posttest scores were compared using analysis of covariance at the .05 confidence level.

The treatment was a lesson closure activity in which students summarized major points of the lesson orally in pairs or by writing a paragraph. Closure occurred in a ten minute time period at the conclusion of all instruction for the lesson objective. Each treatment was given to two seventh grade classes and to two eighth grade classes for

six weeks.

Although this study did not strongly identify either oral lesson closure or written lesson closure as more effective than the other, it did show both instructional methods to be similarly effective in promoting mastery of social studies facts. Lesson closure is an important strategy for teachers to use to help students learn.

This study raises an interesting question regarding age and school performance. The findings from both experiments indicated that younger students performed significantly better in academic achievement than older students in the same grade. Could younger students summarize more skillfully or did they comprehend lesson content more readily? Further research is suggested regarding the issue of adolescent age and academic performance.

A Comparison of the Effect of Oral Versus Written
Lesson Closure on the Achievement of
Seventh and Eighth Grade Students in Social Studies

by

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A Comparison of the Effect of Oral Versus Written
Lesson Closure on the Achievement of
Seventh and Eighth Grade Students in Social Studies

CHAPTER I

INTRODUCTION

Lesson closure is an important element in lesson design. In the implementation of a lesson, closure is the final check for students' understanding in which the major points of the lesson are summarized. The two most common ways teachers require students to give summaries are in oral or written form. Teachers assess students' comprehension of the lesson by listening or by reading. Lesson summaries and/or closure are an integral part of effective teaching. They help students organize their learning.

Lesson closure is a specific component in a popular and widely used educational model, Instructional Theory into Practice (ITIP), developed by Madeline Hunter (1969, 1977). In this model, lessons presenting new concepts to students follow a seven step lesson plan: (1) Anticipatory Set; (2) The Objective and Its Purpose; (3) Instructional Input; (4) Modeling; (5) Monitoring to Check for Understanding; (6) Guided Practice; and (7) Independent Practice. In the Hunter (1977) lesson model, closure occurs in step five, Monitoring to Check for Understanding. At this point, the teacher checks to see if the students have acquired the essential information or the skills necessary to achieve the

instructional objective. If the students demonstrate understanding, the teacher proceeds to guided and independent practice.

The Madeline Hunter educational model has been implemented by the Hillsboro Union High School District, the location of this study. Teachers in the Hillsboro District are trained to use the seven step lesson plan in district sponsored in-service. Staff development and evaluation are based on the Hunter model.

The Hillsboro Union High School District has also adopted a Writing Across the Curriculum (WAC) model for all major writing assignments in content areas in its junior and senior high schools. The Hillsboro program is based on two writing models. The first model was presented in the Oregon Writing Festival Planners' Kit (1985) at the Second Annual Oregon Writing Festival sponsored by the Oregon Council of Teachers of English. The second model, The Writer's Room (1986), was developed by the Edwin Wells Middle School Spring Independent School District in Houston, Texas. The Hillsboro District's writing program was developed by drawing materials from both of these models. Development of the program, its implementation, and teacher training have been conducted by the district's English Departments.

The Hillsboro District's Writing Across the Curriculum model has six steps: (1) Pre-writing; (2) Rough Drafts; (3) Revision; (4) Editing; (5) Final Drafts; and (6) Presenting. The purpose of the program is to integrate writing

into the entire curriculum to give students greater opportunities to practice writing skills and to broaden their understanding of concepts in fields such as social studies, math, and science.

From the two models, Instructional Theory into Practice and Writing Across the Curriculum, this research develops a comparison of oral and written lesson closure methods.

STATEMENT OF THE PROBLEM

The purpose of this study is to compare the effect of two lesson closure methods, oral or written, on the academic achievement of seventh and eighth grade students in social studies.

The Objectives

The Objectives of this research are:

1. to implement the treatments, exposing experimental groups to the written closure method.
2. to determine the academic achievement of social studies students exposed to two methods of lesson closure and to analyze statistically data associated with these two groups.
3. to develop implications for instruction in lesson closure strategies in social studies.

Hypothesis

This research contrasts two instructional methods to identify related differences in student achievement. The null hypothesis to be tested is:

There will be no significant difference in academic achievement of students given instruction in oral lesson closure from students given instruction in written lesson closure.

Lesson closure is the final check at the end of a lesson or lesson segment to assess students' understanding. Closure helps students pull all main points of a lesson together and organize their learning. It enables teachers to evaluate student learning.

Definition of Terms

Academic Achievement: Subject matter or, in the case for this study, information that has been learned by students.

Lesson Closure: The final check at the end of a lesson or lesson segment to assess students' understanding.

Oral Closure: Oral summary of the main points of a lesson. Usually given in pairs at the close of the lesson.

Summarization: The process of restating something briefly or making a summary.

Summary: Condensation of a larger work; an abstract.

Written Closure: A written paragraph summary of the main points of the lesson. It is written to monitor as well

as to facilitate the writer's own comprehension and/or to provide a condensed, external record of the important text segments. Grammatical rules or cohesion of sentences are not a concern in this paragraph summary.

CHAPTER II

LITERATURE REVIEW

Introduction

Throughout their school days, students make summaries, sometimes orally or sometimes in writing, about things they have heard, read, or seen. Students in English classes summarize books, stories, or plays, and students in social studies summarize films, articles, and events. These assignments require them to put main ideas on paper.

This dissertation describes two experiments in which two instructional methods, oral lesson closure and written lesson closure were compared. Each method incorporates the use of summaries, oral or written, to monitor students' understanding of the main points of the lesson.

Lesson closure, as used in this study, is a component in a seven step lesson plan developed by Madeline Hunter (1977). Lesson closure occurs in step five of the Hunter lesson plan. The steps are: (1) Anticipatory Set; (2) The Objective and Its Purpose; (3) Instructional Input; (4) Modeling; (5) Monitoring to Check for Understanding; (6) Guided Practice; and (7) Independent Practice. Closure occurs at the end of the lesson or lesson segment as the final check for all students' understanding.

Teachers who participated in this study were trained to use the Hunter educational model and the seven step lesson

plan. They received their training in district in-service programs in which Hunter strategies were taught by school district personnel. Teachers were encouraged to incorporate Hunter methods into their instructional activities. Teacher evaluations in the Hillsboro Union High School District were and still are based upon this model.

The Hunter (1969) educational model emerged from twenty years of extensive research and analysis by Madeline Hunter and her associates at the University Elementary School, University of California, Los Angeles. Her findings have evolved into practical strategies for teachers to use for instruction. They are based on her observations of effective teaching. The strategies she found are published in her training manuals.

Although the teachers in this study used Hunter (1969) classroom management strategies, this study examines only one element in the Hunter lesson design, lesson closure, which incorporates the use of summarization skills. Closure is the teaching strategy, whereas summarization is the pupil intellectual process. The focus of this study is on summarization.

The remainder of Chapter II includes: (1) a definition of closure as an oral exercise; (2) the review of literature and research findings on oral communication; (3) a definition of closure as a written exercise; (4) a definition of summarization; (5) the review of literature and research findings on summarization; and (6) a summary of this chapter.

Oral Closure

Usually, closure is an oral exercise in the Hunter education model. Students may be asked to review the main points already covered, to summarize the major steps, or to compare different topics. Sometimes students are asked to give their answer to a neighbor or to share it with the whole class. Students may volunteer or they may be called upon by the teacher. Generally, closure is the time when each student is accountable for demonstrating possession of, or progress toward, achievement of needed skills. Stallings (1985) says this check of all students' understanding closes the lesson.

Oral Communication

Oral lesson closure is an instructional method used in this study. Since oral closure is an important aspect of each experiment, it seems appropriate to review literature on oral communication.

Communicating orally is considered very important in society (Fletcher, 1981). Less time has been given to the development of oral communication skills in school because educators assume that children develop oral skills naturally (Fletcher, 1981). Research (Sears and Navin, 1982) has shown that adults and children experience fear and discomfort when called upon for participation in oral activities.

In their study of the causes of student stress, Sears

and Navin (1982) surveyed 911 thirteen year olds in rural, urban, and suburban middle schools in Ohio. Their questionnaire consisted of 25 specific situations which students might face in school. Students were asked to indicate on a five-point scale the degree of stress that each event caused them. In academic performance, giving an oral report ranked first as the most stressful. In a similar study of adults, Work (1978) found adults most pervasive fear was of speaking before a group.

Cottrell (1979) and Lounsbury (1984) believe oral communication may be the most neglected but most important skill to be developed in education. Research on oral interaction and language development suggests the importance of oral activities in school.

Wells, et. al., (1981) conducted an eight year longitudinal study of language development. They reported that the most important influence on rate of language development was the quality of conversation experienced by the child. This was not determined, stated these researchers, by the child's social background. They pointed out that different curricular goals demand different styles of linguistic interaction, and an important part of a teacher's skill is the ability to induct children into appropriate ways of speaking for different purposes and in different contexts.

Other writers support the importance of oral participation in school. Shafer, Staab, and Smith (1983) studied the development of language and the nature of language in learn-

ing for a decade. They reported that interaction through talk at home and in school is essential in bringing about oral language fluency.

Oral closure exercises, as specified in the Hunter (1977) lesson plan, provide increased opportunities for students to participate in oral activities. Each student may give a summary of the main points of the lesson to his/her neighbor or to the whole class.

Written Closure

Lesson closure, as described in the Hunter (1977) lesson plan, appears to be primarily an oral exercise. This exercise, summing up the main points of the lesson, was the oral lesson closure instructional method used in this study. Written lesson closure, the second instructional method employed in this study, was not the usual format for step five, Monitoring to Check for Understanding, in Hunter's (1977) seven step lesson plan.

Written closure is a written paragraph summary of the main points of the lesson. It is written to monitor and to facilitate the writer's own comprehension of important text segments. Grammatical rules or cohesion of sentences are not a concern in this paragraph summary. The focus here was on the summary of the major points of the lesson.

Summaries and/or summarization are major topics in this dissertation. Oral and written summaries are the products of two instructional methods, oral lesson closure and written

lesson closure, used in two experiments. Summarization is, therefore, the topic for a review of literature and research findings.

Summarization

Summarization has been emphasized in recent educational research (Hahn and Garner, 1985; Hidi and Anderson, 1986). Summarization has been defined as the process of restating something briefly or making a summary (American Heritage Dictionary, 1982).

Summarization has been investigated in a variety of ways. It has been identified as a method: (1) for monitoring comprehension and recall; (2) to help students learn; and (3) to improve reading and studying behaviors. Researchers have examined the developmental stages of students to determine the level where summarization is most effective (Brown and Day, 1983; Garner and Hahn, 1983; Winograd, 1984; Garner, 1985). Summarization has been compared with other learning strategies to assess which method is better (Taylor, 1982; Taylor and Beach, 1984; Bromley, 1985).

Summarization has been identified as a method for monitoring comprehension and recall. Reder and Anderson (1980) conducted a study with college students in which they compared the consequences of studying textbook chapters with the consequences of studying summaries derived from these chapters. They wished to discover if the inclusion of main points, details, examples, and additional information en-

hanced learning. They found studying chapter summaries led to better recall than studying the chapters themselves.

Other researchers, Doctorow, Marks, and Wittrock (1978) and Taylor and Berkowitz (1980) found that having students write a one sentence summary following each paragraph they read significantly increased their retention.

Summarization has been identified as a method to help students learn. It provides a monitor for the process of comprehension and recall, and it helps readers clarify the meaning and significance of discourse. Brown, Campione and Day (1981) conducted several research studies to develop routines for summarizing to help students improve their academic achievement. They collected summaries written by children and adults. To analyze these summaries they used a model developed by Kintch and van Dijk (1978). The components of their model are: the reader's schema, the microstructure and the macrostructure of the text, and a set of macro-rules for producing summaries. From these analyses, Brown and Day (1980) identified six basic rules of summarization: (1) deletion of trivial material; (2) deletion of redundant material; (3) substitution of a superordinate term for a list of times or actions; (4) substitution of a superordinate action for a list of components of that action; (5) selection of a topic sentence; and (6) invention of a topic sentence. These six rules were listed by Brown and her colleagues as the methods of condensation used by students engaged in the task of summarizing.

The next step in the research by Brown and Day (1980) was to determine if students could be trained to use these six summarization rules. Day (1980) conducted a study with two groups of junior college students to assess their ability to use summarization rules. The two groups were: (1) average students with no reading or writing problems; and (2) remedial students with writing problems, but no reading problems. She found that average students benefitted more from all forms of the training, but remedial students benefitted only from the most explicit instruction.

Other researchers, Rinehart, Stahl, and Erickson (1986) found that summarization training helped sixth grade students learn by improving their reading and studying behaviors. Summarization training improved recall of major but not minor information on a studying task. It also improved summaries of paragraphs that had main ideas stated within the paragraphs, but not those in which the statement of main ideas had to be invented.

The next question researchers began to ask was at what developmental stages do students effectively use summarization rules and skills? Brown and Day (1983) conducted a study to determine the developmental stages at which students could effectively use the condensation rules for summarizing they had developed in an earlier study. They asked students in grades five, seven, and ten and in college to summarize two expository texts which were written so that five of the six summarization rules could be used. Students were asked

to read the text three times and then to write a good summary. The results showed that fifth graders knew how to delete trivial and redundant elements of text, but only the older students were able to use the complex summarization rules. Tenth graders and college students had difficulty with the invention rule which stipulates that students write a topic sentence.

Other researchers explored the developmental stages of summarization. Garner and Hahn (1983) asked students in grades two, four and six to read and listen to expository text about meteors and to review three videotapes of fifth grade students describing and reading their text summaries. They found that most fourth and sixth grade students were able to rate the bad summary as least acceptable, but second graders did not recognize a good summary. Winograd (1984) examined eighth grade summarization skills and found that most eighth graders knew that a summary should include the important ideas from a passage. Garner (1985) examined summarization deficiencies among ninth, tenth, eleventh, and undergraduate college students. She found strong evidence to support the theory that high school and college learners are aware that important ideas from a descriptive passage should be included in a short summary of that passage. College students included more important ideas in their summaries than other age groups. Her study supported evidence reported in the literature that the ability to find central information and to produce it in some form in a short sum-

mary increases with age and experience.

Summarizing text is very different from the average composing task. Writing activities involve careful planning of content and structure, generation of central ideas and related details, and continuous shifting between these processes. Summarization demands comprehension, evaluation, condensation, and transformation of ideas that have already been presented. The summary writer must decide what to include and eliminate from the original text (Hidi and Anderson, 1986). Writing a summary depends on the writer's ability to write and on the extent to which the writer understands the material to be summarized. Brown, Day, and Jones (1983) investigated students' ability to plan ahead, their sensitivity to important elements in text, and their condensation of important information when writing a summary. Students in grades five, seven, eleven and in college were given materials to memorize. The memory learning was checked prior to summary writing so the researchers could focus on summaries that arose from deliberate operations rather than summaries that were the automatic results of comprehension. The researchers found that students in grade eleven and in college out-performed the younger students in their ability to plan ahead by making rough drafts, in their sensitivity to importance, and in their ability to condense more idea units in the same number of words. The few younger students who planned adequately performed at a level set by college students. Planning was the best predictor of efficiency,

however, the propensity to plan and subjects' age were highly correlated.

Winograd (1984) examined eighth graders' ability to identify important elements in text. He found that some poor readers have difficulty in identifying the information that adults consider important. He concluded that poor readers had different views about which ideas in a text were important. Good readers, suggested Winograd (1984), were more in agreement with adults in their conceptions of importance. Good readers, he continued, were able to identify what the author considered important through use of textual cues even though they may have found some passage elements important because of their particular interest. Ability to identify important elements in a passage is a strategic skill that underlies both summarization and comprehension (Winograd, 1984).

Summarization has been compared with other instructional methods to assess the differences between methods. Taylor (1982) compared a hierarchical summarization strategy with the traditional classroom method of answering questions following reading. A hierarchical summary, according to Taylor, is a reader's summary of the main ideas in text listed in correct sequence. Two experiments were conducted with 40 fifth grade students. In the first experiment, Taylor found the hierarchical summarization group had test scores equal to the question group and higher recall and organization scores. In the second experiment, these findings were not

consistent. She concluded that students must be able to perform the study strategy, the hierarchical summary, reasonably well before it will markedly improve their recall.

Taylor and Beach (1984) conducted a study using a hierarchical summary as an instructional method. In their study, 114 seventh grade students were assigned to one of three groups. The experimental group received instruction and practice in a hierarchical summary procedure used after reading social studies material, the conventional group received instruction and practice comprised of answering and discussing questions after reading social studies material, and the control group received no special instruction. Taylor and Beach (1984) found that the instruction and practice in the hierarchical summary procedure enhanced students' recall of unfamiliar, but not familiar social studies material. It also had a positive effect on the quality of students' expository writing.

Précis writing and outlining were compared in a study by Bromley (1985) with 50 fifth graders. She defines précis as writing in which the student develops a paraphrased summary or abstract of written composition which retains the information and flavor of the original but is condensed to one third its length. Précis writing involves reading and understanding text as well as selecting, rejecting, and paraphrasing ideas. Bromley (1985) defines outlining as the identification of main ideas and supporting details from a text and their representation in a specified format. Results of this

comparison between *précis* writing and outlining showed that both methods appeared to enhance content learning equally. Bromley concluded that students exhibited equally high scores from both methods because they both involved repetition as students identified and generated important ideas in written form. The students reported that outlining rather than *précis* writing would help them understand better and do better on tests.

Annis (1985) investigated the relationship between high or low reading ability and study techniques of reading only, note taking, and student-generated paragraph summaries on the six levels of cognitive learning from textual material when referenced against Bloom's (1956) taxonomy. She found that paragraph summaries were most effective at the application and analysis levels and least effective at the synthesis and evaluation levels. She conducted her study with 84 college freshmen and sophomore students enrolled in an educational psychology course. She concluded that this study provides initial support for the effectiveness of student-generated paragraph summaries for certain levels of questions because these summaries seem to require students to perform encoding.

Summarization has been compared with other classroom procedures such as answering questions, outlining, note taking and reading to determine which procedure is more effective. The research suggests that summarization may have positive effects on reading and studying behaviors and on student academic achievement.

Summary

Throughout their schooling, teachers ask students of all ages to read something, a story, a novel or an article, and later to compose a summary of it either orally or in writing. Oral lesson closure and written lesson closure, the two instructional methods that are compared in this study, incorporate the use of summarization or summaries. Oral closure employs the use of oral summaries to help students organize and review their learning. Research by Sears and Navin (1982) and Work (1978) showed that children and adults may not be developing oral communication skills as readily as educators believe. Research by Wells (1981) indicated the quality of conversation a child experiences has an influence on her/his language development and literacy. Oral lesson closure would give students opportunities to describe, explain, question, and discuss their learning as they summarized the main points of their lesson.

Summarization has been identified as a method for monitoring comprehension and recall (Reder and Anderson, 1980; Doctorow, Marks and Wittrock, 1978; Taylor and Berkowitz, 1980) and as a procedure to help students learn to learn (Brown, Campione and Day, 1981). Summarization has helped students improve their reading and studying behavior (Rinehart, Stahl and Erickson, 1986).

Researchers have discovered that the ability to find important ideas and to produce them in a short summary increases with age and experience (Brown and Day, 1983; Garner

and Hahn, 1983; Winograd, 1984; and Garner, 1985). When summarization was compared with other classroom learning methods, the research suggested that it may have positive effects on reading and studying behaviors and on student academic achievement (Taylor, 1982; Taylor and Beach, 1984; and Annis, 1985).

Writing summaries in lesson closure exercises would give students opportunities to reflect independently on what they had learned, to practice writing in a logical and comprehensible manner, and to express what was learned in their own terms.

This study involves the use of summarization, orally and in writing. The purpose of this research is to assess which summary method, oral lesson closure or written lesson closure, is the more powerful tool for enhancement of student learning.

CHAPTER III

PROCEDURES

This study compared two different instructional methods, oral lesson closure with written lesson closure. Lesson closure is the final check a teacher prescribes at the end of a lesson or lesson segment to assess students' understanding. Closure helps students pull main points of a lesson together and organize their learning. It helps the teacher determine the next step in lesson design.

Design

This was an experimental study in which a pretest-posttest control group design was used. There were two grade levels, seventh and eighth. The design was duplicated for each grade level. The form of this design was:

$$R \quad O \quad X_1 \quad O$$
$$R \quad O \quad X_2 \quad O$$

There were two groups, a control group, X_2 , and an experimental group, X_1 , which were formed by random assignment. Both groups were administered a pretest assessing the dependent variable. The control group received oral lesson closure treatment, and the experimental group received written lesson closure treatment. Both groups were posttested. Posttest scores were compared using analysis of covariance.

Sample

Participants in this study were 156 junior high school students from Hillsboro Union High School District. This district draws its 5,200 students from six independent elementary school districts. Hillsboro High School District, grades 7-12, is comprised of two senior highs and four junior highs.

There were two experiments within this research study. The first experiment was conducted with four seventh grade social studies classes and one teacher at junior high school A. The total student population of school A was 755 with 247 seventh graders. There were 71 students, 35 girls and 36 boys, in the four social studies classes in school A. This district draws from three independent elementary school districts whose primary economic base is agriculture. The occupations of most of the adult population are white collar professional, farmer, gentleman farmer, and migrant worker.

The second experiment was conducted with four eighth grade U.S. history classes and one teacher at junior high school B. The total student population of school B was 720 with 250 eighth graders. There were 85 students, 38 girls and 47 boys, in the four history classes in school B. This school draws from one elementary school district whose economic base is the electronic industries of Intel and Tektronix.

Tables I and II detail the distribution of subjects by school, teacher, class period, gender, and age. In school A,

TABLE I

DISTRIBUTION OF SUBJECTS BY SCHOOL AND TEACHER
FOR: CLASS PERIOD, GENDER, AND AGE

SCHOOL A TEACHER 1						
Class Period	No. of Students	Girls	Boys	Age		
				12	13	
2	19	9	10	14	5	
3	13	6	7	9	4	
4	18	9	9	13	5	
7	21	11	10	12	9	
Total	71	35	36	48	23	

TABLE II

DISTRIBUTION OF SUBJECTS BY SCHOOL AND TEACHER
FOR: CLASS PERIOD, GENDER AND AGE

SCHOOL B TEACHER 2						
Class Period	No. of Students	Girls	Boys	Age		
				13	14	
1	25	9	16	14	11	
3	21	8	13	7	14	
5	19	8	11	11	8	
6	20	13	7	15	5	
Total	85	38	47	47	38	

there was almost an equal number of girls and boys, twice as many 12 year olds as 13 year olds, and 67 Caucasian students. Only three students were of other races, three Hispanic and one Asian. In school B, there were nine more boys than girls, nine more 13 year olds than 14 year olds, and 83 Caucasian students. School B had only two students of other races, one Black and one Asian. There were 48 twelve year

olds in School A and 47 thirteen year olds in School B. Generally, students in grade seven are 12 and students in grade eight are 13.

Students enrolled in social studies and history were a composite of various learning abilities: Handicapped Learner, Chapter I, and low, average, and high achievement levels. Handicapped learners are students who have a physical, mental, or emotional handicap. They receive adult and peer tutoring services from the Learning Resource Center in math, science, and language arts. Chapter I students are disadvantaged children who have low skills in math, reading, and/or language arts. They receive peer tutoring during the school day and adult tutoring two nights each week after school. Portland Level RIT Test scores determine student placement in Handicapped Learner or Chapter I programs. Table III and Table IV detail students who were enrolled in Handicapped Learner and Chapter I programs by school, grade, class period, and gender.

There were three handicapped learners and six Chapter I students in the seventh grade at School A. Of these, four were girls and five were boys. In School B, there were eight handicapped learners and 15 Chapter I students. Of the 23, there were four girls and 19 boys.

In the seventh grade experiment, there were nine students identified as children with learning problems, whereas, in the eighth grade experiment, there were 23 students classified as children with learning problems. There were more

TABLE III
HANDICAPPED LEARNERS
BY SCHOOL, GRADE, CLASS PERIOD AND GENDER

School A Grade 7				School B Grade 8			
Class Period	Boys	Girls	Total	Class Period	Boys	Girls	Total
2	1	0	1	1	1	0	1
3	0	1	1	3	3	0	3
4	0	0	0	5	3	0	3
7	0	1	1	6	1	0	1
Total	1	2	3	Total	8	0	8

TABLE IV
CHAPTER I
BY SCHOOL, GRADE, CLASS PERIOD AND GENDER

School A Grade 7				School B Grade 8			
Class Period	Boys	Girls	Total	Class Period	Boys	Girls	Total
2	1	2	3	1	4	2	6
3	1	0	1	3	2	1	3
4	1	0	1	5	2	1	3
7	1	0	1	6	3	0	3
Total	4	2	6	Total	11	4	15

than twice as many eighth grade students with learning difficulties. The total population for the seventh grade experiment was 71, and the total population for the eighth grade experiment was 85.

Students in social studies and history classes were randomly assigned to their classes by the district on-line

computer system, Oregon Total Information Service, located in Eugene, Oregon. Each school and each student were assigned a number. These numbers were mass added to the computer system in the summer of 1986. The computer randomly selected student numbers to fill class sections for each school in the district.

Both experiments in this study took place over a six-week time period. The first, at School A, took place between January 5 and February 22, and the second, at School B, took place between March 4 and April 22 in 1987. These time periods were agreed upon by the administration, teachers, and researcher. The Staff Development Specialist at School B, recommended the months following Christmas as the most suitable time for conducting research. Teachers in both schools concurred.

Treatment

The treatment was a lesson closure activity in which students summarized major points of the lesson. Closure occurred at the conclusion of all instruction for the lesson objective. Time allowance for closure was about ten minutes. Closure is a component in the Hunter (1977) lesson plan design which the schools in this study included in their teacher in-service education. Teachers in the district are trained to use the Hunter model in in-service classes taught by district personnel. All teachers are required to take these classes. The teachers involved in this research had

been given training in use of Hunter educational strategies in district sponsored in-service programs.

One form of lesson closure is an oral activity in which students summarize main points of the lesson to each other in pairs. Each partner listens and checks the other for understanding. The teacher moves about the room and monitors (listens) for students' understanding of the lesson. At the conclusion of closure, the teacher asks one or two students to give their summaries orally for the class. The teacher makes any corrections or additions to these oral summaries given to the class she/he deems necessary. This oral lesson closure was the treatment given to the control group in this study.

The experimental group was given the new treatment, written lesson closure. In this treatment, students were instructed to summarize major points of the lesson by writing a paragraph. Students exchanged papers with a nearby partner. Each was instructed to read the other's paper, to make any necessary corrections, and to return papers to owners. The teacher would monitor this activity by moving around the room, stopping at each student's desk, reading, and correcting written paragraphs. The teacher would then ask one or two students to read their summaries to the class. Before concluding written closure, the teacher would read or have a student read a paragraph containing the main points of the lesson.

Each teacher was instructed to use each treatment, oral

closure and written closure, with two classes. Thus, each treatment was given in two seventh grade social studies classes and in two eighth grade history classes for a six week time period. The two treatments were randomly assigned to classes by drawing from a hat. The results of the random assignment of treatments to classes is listed in Table V.

TABLE V
RANDOM ASSIGNMENT OF CLASSES TO METHOD
BY TEACHER, CLASS AND GRADE

Oral: Control	Written: Experimental
Tchr 1 - Class 4 - Grade 7	Tchr 1 - Class 2 - Grade 7
Tchr 1 - Class 7 - Grade 7	Tchr 1 - Class 3 - Grade 7
Tchr 2 - Class 3 - Grade 8	Tchr 2 - Class 1 - Grade 8
Tchr 2 - Class 5 - Grade 8	Tchr 2 - Class 6 - Grade 8

To ensure equivalency of treatments, a script was prepared by the researcher with the assistance of project teachers. The script included the dialogue used by project teachers when initiating and conducting treatments. It also provided instructions for teacher behavior while conducting treatments. An example of the script may be found in Appendix A.

Each of the four treatments given in each experiment was a duplicate of the other, except for closure method. Students had the same: teacher, lesson, lesson objectives, textbook, curriculum content (films, worksheets, reading selections, and questions), assignments and tests. Each

activity occurred on the same day and in the same time frame within each class period.

Instrumentation

A search of the literature had revealed that there were no tests available which would measure the subject matter taught in this study. Therefore, the researcher constructed pre/post tests. Examples of these tests may be found in Appendix B.

To ensure validity of the tests, the researcher consulted a panel of experts in one round. A principal, seven teachers, one vice principal/teacher, and one staff development specialist were asked to serve on the panel. These panel members were either experienced social studies teachers and/or social studies majors. A list of panel members may be found in Appendix C.

Each panel member was given papers on which were listed lesson objectives and potential test items. Each lesson objective was listed and directly beneath it were several possible test items. Each test item had a space before it for a check mark. Panel members were instructed to put a check mark in the space before each test item which best tested each objective. Test items which received the highest agreement among panel members for each objective were placed on tests. Test items and level of agreement for each are summarized in Tables VI, VII, and VIII. Examples of materials given to the panel members may be found in Appendix D.

TABLE VI
SEVENTH GRADE PRE/POST TEST ONE
ITEMS AND TALLIES

Test Items	Tallies
1. Map of Africa, Asia, Europe & Middle East	9
1. Middle East crossroad for Europe, Africa & Asia	1
2. Which country <u>not</u> part of Middle East?	6
2. Middle East includes	4
3. Which Middle east country is in Africa?	7
3. Egypt is in Africa & Middle East	3
4. Middle East country with largest land area is	8
4. Middle East country with smallest land area is	2
5. Hammurabi's laws	8
5. Hammurabi believed "eye for eye/tooth for tooth"	2
6. Middle East country with greatest population	7
6. Egypt has larger population than Saudi Arabia	3
7. Ancient times, Iraq called	9
7. Iran was called Mesopotamia	1
8. Studies people, customs & life of ancient times	5
8. Check items which describe what archeologist does	5
9. Life in Ur included	6
9. Which of these is <u>not</u> true of life in Ur?	3
10. An artifact is anything made by humans.	2
10. Which of these is <u>not</u> an artifact?	8
11. People invented calendar & system of astrology	5
11. Babylonians created powerful Mesopotamian empire	3
12. People who developed belief in one God	4
12. Sumerians were first monotheists	2
13. World traders who invented alphabet were	4
13. American alphabet is based on Phoenician alphabet	4
14. Check items do <u>not</u> describe life in ancient Egypt	9
14. Ancient Egyptian civilization included	0
15. Society with government, religion, social classes & writing is	3
15. Check items which describe civilization	7

TABLE VII
SEVENTH GRADE PRE/POST TEST TWO
ITEMS AND TALLIES

Test Items	Tallies
1. Only Arabs live in Middle East	1
1. Most Middle East people	2
1. Which is <u>not</u> true of people in Middle East?	5
2. Palestine, land of Hebrews is	9
2. Ancient times, Israel known as Mesopotamia	0
3. Followers of Islam	2
3. Check items that describe followers of Islam	8
4. Natural resource Middle East has most of	1
4. Which natural resource brought great wealth & modernization to countries of Middle East?	8
5. Religion of most people in Middle East is Islam	3
5. Religion practice by most people in Middle East	7
6. Discovery of gold change Saudi Arabia from poor to wealthy modern country	4
6. Middle East country with most oil is	6
7. Desert wanders are nomads	2
7. Nomadic people who wander Middle East	8
8. Indiri Ghandi was Israel's Prime Minister	1
8. American school teacher born in Russia & became Prime Minister of Israel was	9
9. Arab/Israeli conflict is result of	8
9. Major issue in Arab/Israeli conflict is	0
10. Israel gained independence after end of WWII	3
10. Which highly industrialized Middle East nation gained its independence in 1948?	7
11. Which is <u>not</u> religion born in Middle East?	5
11. Three great religions born in Middle East are Judaism, Christianity & Islam	4

TABLE VIII
EIGHTH GRADE PRE/POST TEST ONE
ITEMS AND TALLIES

Test Items	Tallies
1. Challenges faced by President George Washington	10
1. President Washington's challenges included	0
2. Tax on imports to raise income for Federal government	7
2. Tax on goods manufactured within country is	7
2. Tax placed on manufactured goods is excise tax, whereas, tax on imports is revenue tax	3
3. Constitutional powers suggested by wording of Constitution are called	7
3. Implied powers are clearly stated in Constitution	3
4. Political parties in America	7
4. Strong opposing political views of Jefferson & Hamilton led to establishment of political parties	3
5. Federalist political party	4
5. Republicans believed government should be left to educated & wealthy whereas, Federalist believed common person could govern wisely	2
6. President John Adams problems included	7
6. Although Adams & Jefferson were Presidential opponents, they agreed on all major issues	2
7. Thomas Pinckney negotiated important treaty with Spain which allowed Americans to	5
7. America acquired use of Mississippi River & Port of New Orleans as result of	3
8. Act which gave President power to order suspicious persons who were not citizens to leave was	8
Act which said Americans could be fined or jailed if they criticized President or members of Congress was	8
8. Alien & Sedition Acts interfered with American freedom of speech & rights to citizenship	2

The tests were constructed as objective tests because objectivity of scoring was of prime importance. Objective items were constructed so scoring could be done by observing a single word or phrase or by noting which one of a set of possible responses had been selected. Test items submitted to panel members were either multiple choice or true/false. Multiple choice test items received the highest agreement among panel members. Several test items, numbers eight and thirteen on Table VI were tied. The multiple choice item was selected by the researcher for two reasons: (1) multiple choice items had been selected more often by panel members, and (2) multiple choice items have been found to be excellent for measuring understanding (Lindeman and Merenda, 1979). On Table VI, items two, four, eight, and nine were all multiple choice items. Panel members needed to choose the multiple choice item they deemed most appropriate.

The second eighth grade test, pretest two and posttest two, was constructed by the researcher without consulting panel members in one round. The process of submitting lesson objectives and test items to panel members for their consideration took more time than the researcher had allowed in her plan for completion of the experiment. The difficulty in this process lay in getting papers with members selection of test items returned to the researcher. To get the papers returned from some panel members, the researcher had to write memos, make telephone calls, and/or personally con-

tact individual members. Consequently, in order to continue with the schedule agreed upon with project teachers and administrators, the second eighth grade test was constructed by the researcher.

Reliability of pretests and posttests was established by use of the Kuder-Richardson 20 (K-R #20) formula. This formula estimates internal consistency by determining how all items on a test relate to all other items and to the total test. It is the average of the split-half estimates that would be obtained by splitting the test in half in all possible ways (Lindeman and Merenda, 1979).

The formula for Kuder-Richardson 20 is:

$$r = \frac{K}{K - 1} \left(1 - \frac{\sum_{i=1}^K p_i q_i}{S^2} \right)$$

where r is the estimate of reliability of the test,

K is the number of items in the test,

p_i is the portion of the sample who got item i correct,

q_i is the proportion of the sample who got item i wrong,

S^2 is the variance of the sample on the test (Lindeman and Merenda, 1979).

The Kuder-Richardson formula was the appropriate measurement for reliability for the tests in this experiment because these tests were power tests, not speed tests; examinees were given time to attempt all items; examinees were encouraged to answer all items even if it was necessary to

guess; the score was the number of correct answers; and the multiple choice items were scored dichotomously.

The Kuder-Richardson 20 formula produces a coefficient based on the reliability of a test only half as long as the actual test. Therefore, a correction formula must be applied to the coefficient to obtain the estimate of reliability for the total test. The correction formula which was used in this study was the Spearman-Brown formula (Gay, 1987).

The Spearman-Brown formula is:

$$r = \frac{2r}{1 + r}$$

where r = the total test,

$2r$ = the split half,

$1 + r$ = the split half (Gay, 1987).

There were two tests given to students in the seventh grade experiment. They were: pretest one and posttest one, duplicate tests, and pretest two and posttest two, duplicate tests. Pre/post test one included 15 items which measured student achievement for Unit I, "Ancient Middle East Civilizations". Pre/post test two included 10 items which measured student achievement for Unit II, "Modern Middle East". Pretests were given to all students prior to any instruction on the first day of each unit. Posttests were given on the final day of instruction in each unit.

Results of the reliability analysis using the Kuder-Richardson 20 formula and the Spearman-Brown correction formula for the seventh grade tests were:

Pretest one = .51 Pretest two = .65

Posttest one = .77 Posttest two = .77

The coefficient of .51 for pretest one indicates that the pretest demonstrated moderately low reliability. The coefficient of .65 for pretest two indicates it was moderately reliable. Coefficients .77 for posttest one and posttest two indicate these posttests were of fairly high reliability.

Pretest and posttest scores for the seventh grade were also compared using paired samples t tests. The results of the t test analysis were:

Pretest one mean = 5.9 Pretest two mean = 3.9

Posttest one mean = 8.7 Posttest two mean = 7.1

The difference mean between pretest one and posttest one was 2.8, whereas, the difference mean between pretest two and posttest two was 3.2. These means show a marked difference between pretests and posttests. The academic achievement of seventh graders did improve between pretests and posttests. T test results for posttest one were $t(70) = 9.19$, $p < .05$, and t test results for posttest two were $t(70) = 12.24$, $p < .05$.

There were two tests given to students in the eighth grade experiment. They were pretest one and posttest one, duplicate tests. Pre/post test one included 11 items and measured student academic achievement for Unit I, "The Early Republic". Pre/post test two included 16 items and measured student achievement for Unit II, "The Age of Jefferson". Pretests were given to students prior to any instruction on the first day of each unit. Posttests were given on the

final day of instruction in each unit.

Results of the reliability analysis using the Kuder-Richardson 20 formula and the Spearman-Brown correction formula for the eighth grade tests were:

Pretest one = .61 Pretest two = .69

Posttest one = .71 Posttest two = .90

The coefficient of .61 for pretest one indicates a test of moderately low reliability. Coefficients .69 and .71 for pretest two and posttest one indicate these tests were of moderate reliability. The coefficient of .90 for posttest two indicates a test of high reliability.

Pretest and posttest scores for the eighth grade were also compared using paired samples t tests. The results of the t test analysis were:

Pretest one mean = 5.1 Pretest two mean = 6.7

Posttest one mean = 8.3 Posttest two mean = 11.4

The difference mean between pretest one and posttest one was 3.2 whereas, the difference mean between pretest two and posttest two was 4.7. These means show there was a marked difference between pretests and posttests used in the eighth grade experiment. Student academic achievement did improve between pretests and posttests. The greatest degree of student learning occurred between pretest two and posttest two in the eighth grade experiment. Posttest two was the test with the high reliability coefficient. The t test results on posttest one were $t(84) = 12.35$, $p < .05$, and the t test results for posttest two were $t(84) = 14.26$, $p < .05$.

The moderately low reliability of pretest one in the seventh grade experiment may have been caused by errors of measurement. The test items may have been ambiguous causing students to misinterpret them. For example, questions 10 and 15 had ambiguous answers. On question 10, the ambiguous answer was item C. bones, and on question 15, the ambiguous answer was hunting. Bones is confusing because sometimes if a bone has been altered it can be an artifact. Question 15 asks the examinee to check the items that describe a civilization. Hunting, which is a common sport in our civilization, is one of the answers. Were the tests given again, these answers would be changed or deleted.

Pre/post test one was a difficult test for the seventh graders who participated in this experiment. The factual material the students were expected to learn was new and unfamiliar. Some of the names and terms were hard to spell and pronounce such as: Babylonians, Phoenicians, hieroglyphs, archaeologist, and Bahrain. The content of this unit was hard, abstract, and challenging to learn and on which to be tested. Consequently, this test, because of the terminology it contained, may have been too difficult.

Data Gathering Procedures

There were two duplicate experiments in this study. In both experiments two pre/post tests were given. Each pre/post test measured a three week unit. Each pre/post test pair were duplicate tests. Students were given pretests on

the first day of instruction in each unit at the beginning of each class period prior to receiving any instruction in subject matter for the unit. Posttests were given on the last day of instruction for each unit. No time limits were placed on the completion of tests. Generally, at this educational level, students respond quickly on objective tests. High achievers at the eighth grade level may ponder test questions a little longer. This pretest posttest procedure was followed for both units in each experiment.

In the seventh grade experiment, each set of tests was collected by the project teacher, clipped together by class period, placed in a manila envelope, and mailed to the researcher via the inter-school mail service. In the eighth grade experiment, each set of tests was collected by the project teacher, clipped together by class period, and placed in the researcher's school mailbox.

Preparation and scoring of all tests, pretests, posttests, and recording of all data were done by the researcher.

Data Analysis Procedures

In this study, the dependent variable, the posttest scores, were compared using analysis of covariance to determine if a difference in student academic achievement did occur as a result of exposure to the dependent variable. Posttest scores were compared on the dependent variable, oral lesson closure versus written lesson closure, and three attribute variables: class period, age, and gender. Compari-

sons were also made in these variable combinations: method by sex, sex by period, age by method, age by sex, and period by age. Analysis of covariance was used for all comparisons.

The hypothesis was tested at the .05 confidence level using an independent t test. Data were analyzed using SPSS/PC+, Statistical Package for the Social Sciences (Norusis, 1988).

CHAPTER IV

FINDINGS

The results from two duplicate experiments are presented in this chapter. These results are divided into two sections. Section one contains the findings of the experiment conducted with 71 seventh grade social studies students in school A. Section two contains the findings of the experiment conducted with 85 eighth grade history students in school B. Included in each section are hypothesis tests and tests of statistical significance.

Section One: Seventh Grade Experiment

There were two three week units taught in six consecutive weeks in the seventh grade experiment. Pretest one and posttest one measured student academic achievement for the first three week unit, Unit I, "Ancient Middle East Civilizations". Pretest one and posttest one were duplicate tests. Pretest two and posttest two measured student academic achievement for the second three week unit, Unit II, "Modern Middle East". Pretest two and posttest two were duplicate tests.

Hypothesis Tests

This study was designed to compare two instructional methods, oral lesson closure versus written lesson closure. The null hypothesis is:

There will be no significant difference in academic achievement of students given instruction in oral lesson closure from students given instruction in written lesson closure.

There were two tests given. The null hypothesis was tested using an independent t test on each posttest. The results of the t test on posttest one were $t(70) = -9.19$, $p < .05$. There were 70 degrees of freedom, the t computed was -9.19, and the t tabular was 2.000. The computed t value (-9.19) is smaller than the tabular t value (2.000), therefore, the null hypothesis is retained on posttest one. The results of the t test on posttest two were $t(70) = 12.24$, $p < .05$. There were 70 degrees of freedom, the t computed was 12.24, and the t tabular was 2.000. The computed t value (12.24) is larger than the tabular t value (2.000), therefore, the null hypothesis is rejected on posttest two.

Statistical Tests

Two instructional methods were given to four seventh grade social studies classes. Two classes, period four and period seven, the control group, were given oral lesson closure. Two classes, period two and period three, the experimental group were given written lesson closure. There were 39 students in the control group and 32 students in the experimental group. These two groups, the control group and the experimental group, were compared to assess differences in academic achievement using posttest scores. The statis-

tical tool was analysis of covariance. Confidence was set at the .05 level using the F statistic.

Posttest scores from two posttests, posttest one and posttest two, were compared to assess differences in academic achievement between students given oral lesson closure and written lesson closure. Comparisons were also made by age, sex, and class period.

Method

On posttest one, there were no significant differences in student academic achievement between the two instructional methods, oral lesson closure and written lesson closure. The results of this analysis are shown in Table IX. The co-

TABLE IX
METHOD: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest	58.328	1	58.328	10.457	.002*
Method	11.545	1	11.545	2.070	.155
Residual	379.310	68	5.578		
Total	449.183	70	6.417		

* $p < .05$

variate for posttest one was pretest one. The probability of the calculated F value of 2.070 is .155 with 1 and 68 degrees of freedom. There were no significant differences be-

tween instructional methods on posttest one.

On posttest two, there was a significant difference between the two instructional methods. The results of the analysis for posttest two are shown in Table X. The covar-

TABLE X
METHOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest	31.116	1	31.116	9.790	.003*
Method	15.060	1	15.060	4.738	.033*
Residual	216.134	68	3.178		

* $p < .05$

iate was pretest two. The probability of the calculated F value of 4.738 was .033 with 1 and 68 degrees of freedom. The null hypothesis that there was no significant difference in academic achievement of students given oral closure or written closure was rejected. Students exposed to written lesson closure performed significantly better than those who only experienced oral lesson closure.

Age

The ages of the 71 seventh grade social studies students were 12 and 13. There were 46 twelve year olds and 23 thirteen year olds. These two age groups were compared to assess differences in academic achievement on the two posttests.

On posttest one, there was a significant difference in

academic achievement between the two ages. Twelve year olds did better. The results are shown in Table XI. The covariate

TABLE XI
AGE: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest	58.328	1	58.328	10.866	.002*
Age	25.840	1	25.840	4.814	.032*
Residual	365.015	68	5.368		
Total	365.015	70	6.417		

* $p < .05$

was pretest one. The probability of the calculated F value of 4.814 was .032 with 1 and 68 degrees of freedom. There was a significant difference between ages. Twelve year olds achieved higher academic test scores than thirteen year olds on posttest one.

On posttest two, there was no significant differences between age groups.

Using a two by two analysis of covariance, the two age groups, 12 and 13, were compared with the two instructional methods, oral closure and written closure. There were 48 twelve year olds and 23 thirteen year olds. There were 32 students given the written method and 39 students given the oral method. No significant differences were found on posttest one. However, a significant difference for method was

was found on posttest two. The results are in Table XII.

TABLE XII
AGE BY METHOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	31.116	1	31.116	9.984	.002*
Age	5.926	1	5.926	1.901	.173
Method	15.574	1	15.574	4.997	.029*
Age x Method	4.509	1	4.509	1.447	.233
Residual	205.700	66	3.117		
Total	262.310	70	3.117		

* $p < .05$

The covariate was pretest two. The probability of the calculated F value of 1.901 was .173 for age. The degrees of freedom were 1 and 66. There was no significant difference between the two ages, 12 and 13. The probability of the calculated F value of 4.997 was .029 for method. The degrees of freedom were 1 and 66. The null hypothesis was rejected. The written method was found to be significantly better than the oral method on posttest two. There was no significant interaction effect.

Period

There were four social studies class periods in this study. The periods, time of day, number of students, and treatments given are listed in Table XIII.

TABLE XIII
CLASS PERIODS/TREATMENTS SUMMARY

Class Period	Time of Day	Number of Students	Treatment Given
2	9:15 to 10:00	19	Written
3	10:05 to 11:50	13	Written
4	11:40 to 12:15	18	Oral
7	2:00 to 2:45	21	Oral

The class periods were compared to determine if there was a difference in treatments by period on posttest one and posttest two. The results of the analysis on posttest one are shown in Table XIV.

TABLE XIV
CLASS PERIODS: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest one	58.328	1	58.328	10.254	.002*
Period	15.407	1	5.136	.903	.445
Residual	375.448	66	5.689		
Total	449.186	70	6.417		

* $p < .05$

The covariate was pretest one. The probability of the calculated F value of .903 was .445 for period. The degrees of freedom were 3 and 66. There was no significant difference between class periods on posttest one. The null hypo-

thesis was retained.

Four class periods were compared on posttest two to determine if time of day affected student achievement when students were given oral closure or written closure. As in posttest one, no significant differences were found in student achievement by class period. The results of posttest two are shown in Table XV.

TABLE XV
CLASS PERIODS: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	31.116	1	31.116	9.805	.003*
Period	21.739	3	7.246	2.283	.087
Residual	209.456	66	3.174		
Total	262.310	70	3.747		

* $p < .05$

The covariate was pretest two. The probability of the calculated F value of 2.283 was .087 with 3 and 66 degrees of freedom. The null hypothesis was retained on posttest two. There were no significant differences between treatments by class periods.

Using a two by four analysis of covariance, the two sexes, boys and girls, were compared with the four class periods. The results of this analysis for posttest one are shown in Table XVI.

TABLE XVI
SEX BY PERIOD: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest one	58.328	1	58.328	9.820	.003*
Sex	2.218	1	2.218	.373	.543
Period	15.581	3	5.194	.874	.459
Sex x period	4.982	3	1.661	.280	.840
Residual	368.247	62	5.939		
Total	449.183	70	6.417		

*p .05

The covariate was pretest one. The probability of the calculated F value of .373 was .543 with 1 and 62 degrees of freedom for sex. There were no significant differences in academic achievement between boys and girls. The probability of the calculated F value of .874 was .459 with 3 and 62 degrees of freedom for period. There were no significant differences between treatments by period. The null hypothesis was retained. The interaction effect was not significant.

Using a two by four analysis of covariance the two sexes, boys and girls, were compared with four class periods on posttest two. The results of this analysis are shown in Table XVII.

The covariate was pretest two. The probability of the calculated F value of .021 was .885 with 1 and 62 degrees of freedom for sex. There were no significant differences in academic achievement between boys and girls on posttest two.

TABLE XVII

SEX BY PERIOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest	31.116	1	31.116	9.474	.003*
Sex	.069	1	.069	.021	.885
Period	21.688	3	7.229	2.201	.097
Sex x Period	5.750	3	1.917	.584	.628
Residual	203.637	62	3.284		
Total	262.310	70	3.747		

*p .05

The probability of the calculated F value of 2.201 was .097 with 3 and 62 degrees of freedom for period. There were no significant differences between treatments by period. The null hypothesis was retained. There was no significant interaction effect.

Summary

In summary, the findings for the seventh grade experiment included: (1) The null hypothesis was retained on posttest one; (2) The null hypothesis was rejected on posttest two; (3) There were no significant differences between instructional methods on posttest one; (4) There was a significant difference between instructional methods on posttest two, the written method was better; (5) There was a significant difference between ages on posttest one, twelve year olds did better; (6) There were no significant differences

between ages on posttest two; (7) There were no significant differences between sexes on both posttests; and (8) There were no significant differences between periods on both posttests.

Section Two: Eighth Grade Experiment

There were two three week units taught in six consecutive weeks. Pretest one and posttest one measured student academic achievement for the first three week unit, Unit I, "The Early Republic". Pretest one and posttest one were duplicate tests. Pretest two and posttest two measured student academic achievement for the second three week unit, "The Age of Jefferson". Pretest two and posttest two were duplicate tests.

Hypothesis Tests

This study was designed to compare two instructional methods, oral lesson closure versus written lesson closure. The null hypothesis is:

There will be no significant difference in academic achievement of students given instruction in oral lesson closure from students given instruction in written lesson closure.

There were two tests given. The null hypothesis was tested using an independent t test on each posttest. The results of the t test on posttest one were $t(84) = -12.35$, $p < .05$. There were 84 degrees of freedom, the t computed was -12.35,

and the t tabular was 2.000. The computed t value (-12.35) is smaller than the tabular t value (2.000), therefore, the null hypothesis is retained on posttest one. The results of the t test on posttest two were $t(84) = -14.26$, $p .05$. There were 84 degrees of freedom, the t computed was -14.26, and the t tabular was 2.000. The computed t value (-14.26) is smaller than the tabular t value (2.000), therefore, the null hypothesis is retained on posttest two.

Statistical Tests

Two instructional methods were given to four eighth grade history classes. Two classes, period three and period five, the control group, were given oral lesson closure. Two classes, period one and period six, the experimental group, were given written lesson closure. There were 40 students in the control group and 45 students in the experimental group. These two groups, the control group and the experimental group, were compared for differences in academic achievement using posttest scores. The statistical tool was analysis of covariance. Confidence was set at the .05 level using the F statistic.

Posttest scores from two posttests, posttest one and posttest two, were compared to assess differences in academic achievement between students given oral lesson closure and written lesson closure. Comparisons were also made by age, sex, and class period.

Method

On posttest one, there were no significant differences in student academic achievement between the two instructional methods, oral lesson closure and written lesson closure. The results of this analysis are shown in Table XVIII.

TABLE XVIII
METHOD: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest	3.915	1	3.915	1.482	.227
Method	9.526	1	9.526	3.606	.061
Residual	216.606	82	2.642		
Total	230.047	84	2.739		

The covariate for posttest one was pretest one. The probability of the calculated F value of 3.606 was .061 with 1 and 82 degrees of freedom. The null hypothesis was retained. There were no significant differences between methods.

On posttest two, there were no significant differences in student academic achievement between the two instructional methods, oral closure and written closure. The probability of the calculated F value of .521 was .472 with 1 and 82 degrees of freedom. The null hypothesis was retained. The results of posttest two are shown in Table XIX.

TABLE XIX
METHOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	333.883	1	333.883	37.330	.001*
Method	4.660	1	4.660	.521	.472
Residual	733.410	82	8.944		
Total	1071.953	84	12.761		

* $p < .05$

Age

The ages of the 85 eighth grade history students were 13 and 14. There were 47 thirteen year olds and 38 fourteen year olds. These two groups were compared to assess differences in academic achievement on two posttests.

On posttest one, there was a significant difference between ages 13 and 14. The results are shown in Table XX.

TABLE XX
AGE: POSTTEST ONE
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest one	3.915	1	3.915	1.530	.220
Age	16.284	1	16.363	6.363	.014*
Residual	209.848	82	2.559		
Total	230.047	84	2.739		

* $p < .05$

The covariate was the pretest on posttest one. The probability of the calculated F value of 6.363 was .014 with 1 and 82 degrees of freedom. There was a significant difference between age groups. Thirteen year olds did better than fourteen year olds.

Thirteen year olds did better on posttest two also. The results of the analysis for posttest two are shown in Table XXI.

TABLE XXI
AGE: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	333.883	1	333.883	42.016	.001*
Age	86.449	1	86.449	10.879	.001*
Residual	651.621	82	7.947		
Total	1071.953	84	12.761		

* $p < .05$

The covariate was pretest two. The probability of the calculated F value of 10.879 was .001 with 1 and 82 degrees of freedom. There was a significant difference between ages 13 and 14. Thirteen year olds did significantly better on posttest two when pretest two was held constant.

Using posttest two and a two by two analysis of covariance, a comparison was made of age by method. In this analysis, there were 47 students of age 13 and 38 students of age 14. Forty five students were given written closure and

40 students were given oral closure. The results of this analysis are shown in Table XXII.

TABLE XXII

AGE BY METHOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	333.883	1	333.883	42.468	.001*
Age	81.832	1	81.832	10.409	.002*
Method	.043	1	.043	.006	.941
Age x Method	22.622	1	22.622	2.877	.094
Residual	628.956	80	7.826		
Total	1071.953	84	12.761		

* $p < .05$

The covariate was pretest two. For age the calculated F value of 10.409 was .002 with 1 and 80 degrees of freedom. There was a significant difference for the main effect, age. For method, the calculated F value of .006 was .941 with 1 and 80 degrees of freedom. There was no significant difference for the main effect, method. There was no significant interaction effect.

Sex

Posttest scores were compared by sex to determine if significant differences in academic achievement could be found. There were 40 girls and 45 boys in the eighth grade experiment. On both posttests, no significant differences

were found in student academic achievement between sexes. Using a two by two analysis of covariance, the two methods were compared by sex. Again, no significant differences were found between methods or between sexes on either posttest one or posttest two.

Using posttest two, a two by two analysis of covariance was done. There were 47 students of age 13 and 38 students of age 14. There were 40 girls and 45 boys. The results of these comparisons showed a significant difference for age, but no interaction effect. These results are reported in Table XXIII.

TABLE XXIII
AGE BY SEX: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	333.883	1	333.883	41.238	.001*
Age	74.323	1	74.323	9.180	.003*
Sex	3.788	1	3.788	.468	.496
Age x Sex	.108	1	.108	.013	.908
Residual	647.725	80	8.097		
Total	1071.953	84	12.761		

* $p < .05$

The covariate was pretest two. For age, the probability of the calculated F value of 9.180 was .003 with 1 and 80 degrees of freedom. There was a significant difference between ages. Thirteen year olds did better. For sex, the probability of the calculated F value of .468 was .496 with

1 and 80 degrees of freedom. There was no significant difference in achievement between boys and girls.

Period

There were four history class periods in this study. The periods, time of day, number of students and treatments given are listed in Table XXIV.

TABLE XXIV
CLASS PERIODS/TREATMENTS SUMMARY

Class Period	Time of Day	Number of Students	Treatment Given
1	8:20 to 9:05	25	Written
3	10:00 to 10:45	21	Oral
5	12:15 to 1:00	19	Oral
6	1:05 to 1:50	20	Written

The class periods were compared to determine if there was a difference in treatments by period on posttest one and posttest two. The results of the analysis for both posttests showed no significant differences in student achievement scores by class periods.

A two by four analysis of covariance was developed to compare the two methods with the four periods. The results of this analysis showed no significant difference between methods by periods on posttest one. The findings are shown in Table XXV.

The covariate was pretest one. For method, the probability of the calculated F value of .909 was .343 with 1

TABLE XXV
 METHOD BY PERIOD: POSTTEST ONE
 ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest one	3.915	1	3.915	1.479	.228
Method	2.408	1	2.408	.909	.343
Period	4.776	2	2.388	.902	.410
Residual	211.829	80	2.648		
Total	230.047	84	2.739		

and 80 degrees of freedom. There was no significant difference between methods. For period, the probability of the calculated F value of .902 was .410 with 1 and 80 degrees of freedom. There were no significant differences between periods on posttest one.

There were no significant differences between methods or periods on posttest two.

A two by four analysis of covariance was developed to compare the two sexes with the four periods. Again the results showed no significant differences between sexes or between periods on posttest one or posttest two. The results of posttest two are shown in Table XXVI.

The covariate was pretest two. For sex, the probability of the calculated F value of .905 was .344 with 1 and 78 degrees of freedom. There were no significant differences between boys and girls in academic achievement on posttest two. For period, the probability of the calculated F value

TABLE XXVI
SEX BY PERIOD: POSTTEST TWO
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Pretest two	333.883	1	333.883	38.081	.001*
Sex	7.937	1	7.937	.905	.344
Period	31.631	2	15.815	1.804	.171
Sex x Period	6.644	2	3.322	.379	.686
Residual	683.882	78	8.768		
Total	1071.953	84	12.761		

* $p < .05$

of 1.804 was .171 with 2 and 78 degrees of freedom. There were no significant differences between periods on posttest two. There was no interaction effect.

Summary

In summary, the findings from the eighth grade experiment included: (1) The null hypothesis was retained on posttest one; (2) The null hypothesis was retained on posttest two; (3) There were no significant differences between instructional methods on posttest one or posttest two; (4) Thirteen year-olds did significantly better than fourteen year olds on both posttests; (5) There were no significant differences between sexes' academic achievement on both posttests; and (6) There were no significant differences between periods on both posttests.

Post Total

All of the posttest scores for the seventh and eighth grade experiments were added together to form total scores. These total scores were transformed into T-scores. The advantage of T-scores is that they allow scores from different tests or subtests to be compared (Gay, 1987). The two methods, oral closure versus written closure, were compared. There were 77 students given written closure and 79 students given oral closure. The findings are shown in Table XXVII.

TABLE XXVII

METHOD: POST TOTAL SCORES
ANALYSIS OF COVARIANCE SUMMARY TABLE

Source of Variation	Sum of Squares	<u>df</u>	Mean Square	<u>F</u>	<u>p</u>
Method	29.240	1	29.240	116	.734
Residual	38828.504	154	252.133		
Total	38857.744	155	250.795		

The probability of the calculated F value of .116 was .734 with 1 and 154 degrees of freedom. There were no significant differences in student academic achievement between methods. The null hypothesis was retained.

CHAPTER V

CONCLUSIONS

This chapter includes a review of the study, a discussion of the findings, conclusions, implications, and recommendations for further study.

Review of the Study

The purpose of this study was to determine which lesson closure method, oral or written, was the more powerful tool for enhancement of student learning. Lesson closure is the final check at the end of a lesson which helps students pull all the main points of a lesson together and enables the teacher to assess students' understanding of the lesson.

This study was composed of two duplicate experiments. Experiment I was conducted with 71 seventh grade social studies students at school A, and Experiment II was conducted with 85 eighth grade history students at school B. A pre-test posttest control group design was used for both experiments. The control group was given oral closure and the experimental group was given written closure. Posttest scores were compared using analysis of covariance at the .05 confidence level.

The null hypothesis was:

There will be no significant difference in academic achievement of students given instruction in oral lesson closure from students given instruction in

written lesson closure.

Discussion of the Findings

Seventh Grade Experiment

There were two pretests and two posttests in the seventh grade experiment. Pretest one and posttest one were duplicate tests. Pretest two and posttest two were duplicate tests. Each set of pre/post tests measured student academic achievement for a three week period.

When the two instructional methods, oral closure versus written closure, were compared on posttest one, there was no significant difference between methods. On posttest two, however, there was a significant difference between instructional methods. The written method was found to be significantly better than the oral method.

The instructional materials used for the two units were different which might explain why the written closure method was better on posttest two. Unit I entitled "Ancient Middle East Civilizations", which was measured by posttest one, was based primarily on readings and questions from the textbook. Each student had her/his own textbook for study and test review. Thus, regardless of the closure method given, oral versus written, all students could use their textbook which included most of the information for this unit for study. Posttests were given on the same day as unit tests. Posttests were constructed by the researcher whereas, unit tests

were made by the project teachers.

Unit II, "Modern Middle East", which was measured by posttest two, was based on filmstrips, filmstrip questions, and reading selections from Junior Scholastics. The Junior Scholastic periodicals were in room sets of 30 copies only. All 71 students in the experiment had to share these room sets. Very little information was available in students' textbooks for Unit II. Students given instruction in written closure had paragraph summaries in writing of the main points of each lesson. Students given instruction in oral closure had summarized the main points of each lesson orally but had nothing in hand to review for testing. With so little information available in the textbook for Unit II, written summaries may have provided students the additional review material needed to score higher on posttest two. The written closure method was found to be significantly better on posttest II.

Contrasting posttest results were also found when seventh grade students were compared on academic achievement by age. Twelve year olds scored higher than thirteen year olds on posttest one but not on posttest two. Of the 71 students participating in this study, 48 were age 12 and 23 were age 13. A possible explanation for the differing posttest results between the two ages may lie in the achievement records of the 23 students aged 13.

Six of the 23 had learning problems. Two of these six had failed one grade in elementary school. Five of these

six were enrolled in Chapter I, the program designed to help students improve their basic skills in mathematics, reading, and language arts. Two of these five who were enrolled in Chapter I were also enrolled in the Handicapped Learner Program. Winograd (1984) found that remedial readers have difficulty summarizing text because they tend to select information that is not central or they omit information contained in a text's final segments. The ability to identify the important elements in a passage or in a lesson is an essential skill for summarization and comprehension.

Another six of the 23 students aged 13 had moved to another school between the end of the study in February and the following September. According to Blane (1985), geographic mobility has been perceived by a large number of parents and teachers as a major difficulty for school children. Studies which support this theory that mobility could be a deterrent to academic achievement were done by Boynton and McKenna (1965), Frazer (1970), Gallagher (1965) and Miller (1966).

If the six mobile students are added to the six problem learners, the total number of 12 is more than half of the students aged 13. These combined students, problem learners and mobile students, may account for the lower achievement attained by the students of age 13. This may explain why 12 year olds achieved significantly higher than 13 year olds on posttest one. There were, however no significant differences between ages on posttest two.

Eighth Grade Experiment

There were two pretests and two posttests in the eighth grade experiment. Pretest one and posttest one were duplicate tests. Pretest two and posttest two were duplicate tests. Each set of pre/post tests measured student academic achievement for a three week period.

When the two instructional methods, oral closure versus written closure, were compared on posttest one and posttest two, there were no significant differences between instructional methods. Both units in the eighth grade study were taught in much the same way. Students' textbooks were the primary source of information. This was clearly a limitation of the study. Instructional units should have been designed which would have employed a variety of teaching materials similar to the seventh grade experiment. One unit could have focused on the textbook using reading selections, questions, and discussions. The second unit could have combined lecture, films, and reading selections from other sources. The differing instructional units may have offered contrasting results.

There were significant academic achievement differences between the two age groups, 13 and 14 year olds, on both posttests in the eighth grade experiment. Of the total population of 85, there were 47 students aged 13 and 38 students aged 14. Of the 38 who were 14, twelve were enrolled in Chapter I, the remedial program for mathematics, reading,

and language arts. Four of these 12 were handicapped learners. Two other 14 year olds were handicapped learners, and six others had been retained in school. Five of the six who had been retained had experienced retention in elementary school, and one had been retained in the eighth grade. Twenty students aged 14, more than 50 percent of the total number of 38, had learning problems identified either as Chapter I, Handicapped Learner, or retention. Winograd (1984) found that poor readers have difficulty selecting the information that adults consider important. If these problem learners had difficulty selecting important ideas, this might explain their lower achievement on both posttests in the eighth grade experiment.

Implications

This research study examined the process of summarization which has been identified by Brown, Campione, and Day (1981) as an effective method of learning content material for a wide range of students. Summarization can be an effective study skill. It has helped students improve their reading and studying behavior (Rinehart, Stahl, and Erickson, 1986). Summarization integrates reading and writing and requires the use of listening and speaking skills which benefit students in many ways.

This study was conducted in regular classroom settings and employed the use of two summary strategies, oral lesson closure and written lesson closure. The findings from this

research showed that neither instructional method superseded the other. Only in a single half of the seventh grade experiment was there evidence that written summarization was better. The findings did show both instructional methods to be similarly effective in promoting mastery of social studies facts. Lesson closure is an important strategy for teachers to use to help students learn. Closure should be incorporated in teachers' instructional programs.

Cottrell (1979) and Lounsbury (1984) believe that oral communication may be the most neglected but most important skill to be developed in education. Wells (1981) suggests that an important part of a teacher's skill is the ability to induct children into appropriate ways of speaking for different purposes. Oral closure exercises in which students sum up major lesson points in social studies, science, mathematics or physical education would increase students' opportunities for oral expression and provide suitable ways of speaking for different purposes. Oral closure could provide additional opportunities for students to increase their oral communication activities in schools and to develop this important skill.

This study raises an interesting question about the issue of age and school performance. Educators and psychologists have theorized that older children have a significant advantage in mental age, and, consequently, perform better in school (Sweetland and De Simmone, 1987). The results of this dissertation indicated that younger students performed

significantly better than older students in the same grade. In the seventh grade experiment, students of age 12 achieved significantly better than students of age 13, and in the eighth grade experiment, students of age 13 achieved significantly better than students of age 14. Were the younger students' performances better because they could summarize more skillfully or did they comprehend the lesson more readily? Did the younger students have better reading or listening skills? Further research into this issue of adolescent age and school performance could be valuable because summarizing is an important educational and/or life time skill.

Recommendations

This study had a number of limitations. They were:

- (1) The seventh grade tests and the first eighth grade test, pre/post test one, had limited reliability. The only test with high reliability was the second eighth grade test, post-test two. The reliability of posttest two was .90. Consequently, the findings are not dependable and cannot be used to form reliable generalizations.
- (2) The sample was limited to junior high students. Only seventh and eighth grade students were used in this study.
- (3) The curriculum appears to have contained too much factual material for seventh grade students to learn. The amount of text for each objective in the seventh grade experiment should have been reduced.
- (4) There were too many lessons for the

seventh grade project teacher to teach. It was difficult to ensure strict adherence to the prepared script.

Since the findings of this study did not clearly discriminate between the two lesson summary methods, oral versus written, the following suggestions are this researcher's recommendations for further study. (1) Conduct a pilot study to test the reliability of the measurement instruments. Research conducted in classroom settings incorporating traditional curriculum content are of value. It is important, however, to construct reliable tests for generalizable findings. (2) Enlarge the sample. Research has established that summarizing skills vary among age groups (Brown, Campione, and Day, 1981). Elementary, junior high, and high school students would offer a broader range for a sample. (3) Select a skill or skills to study. Skills such as learning to place the five map essentials (title, key, borders, direction finder, and scale of miles) correctly on a map or learning to use latitude and longitude lines (a map grid) to locate places on a map are regularly taught in the social studies curriculum. These skills require less use of factual material for instruction and may be easier to measure clearly. (4) Choose contrasting instructional materials. Contrasting instructional materials were used in the two units taught in the seventh grade experiment, but this was not the case in the eighth grade experiment. Differing instructional materials and strategies might result in a clearer distinction regarding the differences between the

two closure methods. For example, one unit might incorporate the use of more visual media such as films, film strips, and/or overheads for instructional purposes. The second unit might focus primarily on textbook readings and questions with work sheets and discussions. These two differing instructional approaches could be compared to determine which summary method is more effective for a particular combination of curriculum content.

Research has shown that summarization is an effective tool for improving reading and studying behaviors (Rinehardt, Stahl, and Erickson, 1986). It also helps students comprehend and organize their learning (Brown, Campione, and Day, 1981; Annis, 1985). This research did not clearly establish a difference between the two lesson closure methods, oral versus written. It did show both methods to be similarly effective in promoting mastery of social studies facts. Lesson closure is an important strategy for teachers to use to help students learn. There is still opportunity for additional study to discern which method is the more powerful tool for the enhancement of student achievement. Research needs to be conducted to determine which lesson closure method best fits each learning style, or if teachers should freely expose all students to both methods.

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A P P E N D I C E S

APPENDIX A

SCRIPT FOR INITIATING AND CONDUCTING TREATMENTS

Oral Lesson Closure

Directions for students to be given by teacher:

1. Look at the objective of the lesson on the black board.
2. Think about what you have learned that relates to this objective.
3. To the person sitting near you, summarize (say) the main points of the lesson. Have your partner say them back to you.
4. I will be walking around the room listening to your summaries. I may ask you to tell me (summarize) your understanding of the main points of the lesson.

Written Lesson Closure

Directions for students to be given by teacher:

1. Look at the objective of the lesson on the black board.
2. Think about what you have learned that relates to this objective.
3. On a piece of notebook paper, summarize in writing the main points of the lesson. Use sentences and begin your first sentence with the topic of this lesson.
4. Exchange papers with the person sitting near you. Read each others papers and return them to owners.
5. I will be coming to each of you to check your summaries.

Instructions to Teacher

1. It is important for you to listen to and/or read their summaries of the lesson. Make any corrections you feel are appropriate for their learning.
2. It is important for you to be moving around the room monitoring both oral and written closure activities to ensure total student participation.

3. Be sure you say the correct summary (answer) to the class at the conclusion of closure activities.
4. These closure activities should occur when all direct instruction and instructional activities related to the objective have been completed.

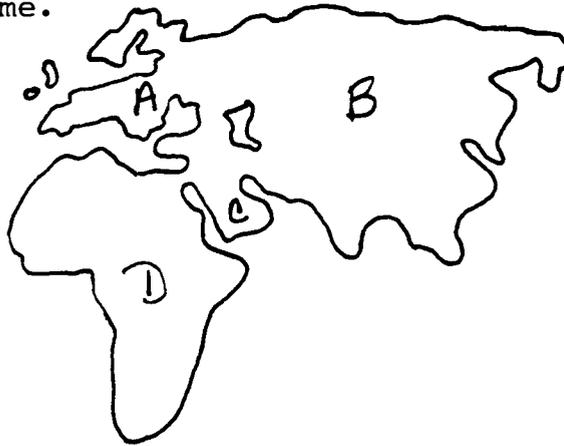
APPENDIX B

SEVENTH GRADE
ANCIENT CIVILIZATIONS: PRE/POST TEST ONE

Directions: Print the letter of the correct answer in the space before the number.

1. Identify Africa, Asia, Europe, and the Middle East by placing the letter from the map in the space before the name.

_____ Africa
 _____ Asia
 _____ Europe
 _____ Middle East



- _____ 2. Which country is not part of the Middle East?
 A. Israel B. Iran C. Oman D. South Africa
- _____ 3. Which Middle East country is in Africa?
 A. Turkey B. Egypt C. Yemen D. Lebanon
- _____ 4. The Middle East country with the largest land area is
 A. Bahrain B. Afghanistan C. Saudi Arabia D. Iran
- _____ 5. The Middle East country with the smallest land area is
 A. Bahrain B. Turkey C. Saudi Arabia D. Egypt
- _____ 6. The Middle East country with the greatest population is
 A. Saudi Arabia B. Iran C. Iraq D. Egypt
- _____ 7. In ancient times, Iraq was called
 A. Palestine B. Persia C. Egypt D. Mesopotamia
- _____ 8. A person who studies the people, customs, and life of ancient times is
 A. an anthropologist B. a historian C. an archaeologist D. a specialist
- _____ 9. Life in Ur included
 A. learning to be a scribe in a temple school
 B. writing on a clay tablet

- C. Walking through narrow, crooked streets
- D. A and B
- E. all of these

- _____ 10. Which of these is not an artifact?
 A. pottery B. belt buckle C. bones D. coke can
- _____ 11. The people who invented a calendar and a system of astrology were the
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians
- _____ 12. The people who developed a belief in one God were
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians
- _____ 13. The world traders who invented the alphabet were the
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians
14. Check the items that do not describe life in ancient Egypt.

_____ pharaohs

_____ clay tablets

_____ Ur

_____ pyramids

_____ many gods

_____ hieroglyphs

_____ great trading cities

15. Check the items that describe a civilization.

_____ a king

_____ specialized jobs

_____ nomadic life

_____ writing

_____ religion

_____ hunting

APPENDIX B

SEVENTH GRADE
MODERN MIDDLE EAST: PRE/POST TEST TWO

Directions: Print the letter of the correct answer in the space before the number.

- _____ 1. Which is not true of people in the Middle East?
A. speak Arabic B. live in large families
C. male is head of household D. own most of their own land
- _____ 2. Palestine, the land of the Hebrews, is known today as
A. Iraq B. Iran C. Israel D. Egypt
- _____ 3. Check the items that describe the followers of Islam:
- _____ sacred book is the Koran
- _____ sacred book is the Bible
- _____ belief in one God, Allah
- _____ worships many gods
- _____ follows the prophet, Mohammad
- _____ Jerusalem is central to religious activities
- _____ faces Mecca and prays daily five times
- _____ 4. Which of these natural resources has brought great wealth to countries of the Middle East?
A. gold B. oil C. water D. forests
- _____ 5. The religion practiced by most people in the Middle East is
A. Christianity B. Judaism C. Islam D. Hinduism
- _____ 6. The Middle East country that is believed to have more oil than any other country in the world is
A. Saudi Arabia B. Kuwait C. Iran D. Iraq
- _____ 7. Nomadic people who wander throughout the Middle East are
A. Indians B. Egyptians C. Bedouins D. Peasants

- _____ 8. Which highly industrialized Middle East nation gained its independence in 1948?
A. Saudi Arabia B. Iran C. Iraq D. Israel
- _____ 9. An American school teacher who was born in Russia and became the Prime Minister of Israel was
A. Indiri Ghandi B. Nkrumah C. Golda Meir
D. Mohammad
- _____ 10. The Arab/Israeli conflict is the result of
A. fights over oil rights
B. Arab and Jewish claims for the same land
C. religious differences
D. all of these
- _____ 11. Which of the following is not a religion that was born in the Middle East?
A. Christianity B. Judaism C. Islam D. Hinduism

APPENDIX B

EIGHTH GRADE
EARLY REPUBLIC: PRE/POST TEST ONE

Directions: Print the letter of the correct answer in the space before the number.

- _____ 1. The challenges faced by President Washington were
 - A. to set policy and direct the nation using his own best judgment
 - B. to fill government positions with people who were "friends of the constitution"
 - C. to establish a cabinet of advisors as outlined in the Constitution
 - D. both A and B
 - E. A, B, and C
- _____ 2. A tax on all imports to raise income for the federal government is
 - A. a revenue tax
 - B. an excise tax
 - C. a sales tax
 - D. an income tax
- _____ 3. A tax on goods manufactured within the United States is
 - A. a revenue tax
 - B. an excise tax
 - C. a sales tax
 - D. an income tax
- _____ 4. Constitutional powers that are suggested by the wording of the Constitution are called
 - A. civil liberties
 - B. implied powers
 - C. home rule
 - D. martial law
- _____ 5. Political parties in America
 - A. were established by the Constitution
 - B. were developed by George Washington
 - C. were an outgrowth of the differing beliefs of Jefferson and Hamilton
- _____ 6. Jefferson led the _____ political party which spoke for small farmers and working class people
 - A. Federalist
 - B. Republican
- _____ 7. Hamilton led the _____ party which represented bankers, merchants, manufacturers, and large land-owners
 - A. Federalist
 - B. Republican
- _____ 8. President John Adams problems included
 - A. having his presidential opponent for vice president
 - B. establishing a cabinet of loyal friends as outlined in the Constitution

- C. winning by only a narrow margin
- D. all of these

- _____ 9. In 1795, Thomas Pinckney negotiated an important treaty with Spain that allowed Americans to
- A. use the Mississippi River and the port of New Orleans without fear of interference
 - B. trade with the Spanish colonies in North and South America
 - C. move into Florida
 - D. use Spanish vessels to transport goods to France and Britain
- _____ 10. The act which gave the President the power to order suspicious persons who were not U.S. citizens to leave the country was the
- A. Alien Act
 - B. Sedition Act
 - C. Coercive Act
 - D. Quartering Act
- _____ 11. The act which said that Americans could be fined or jailed if they criticized the President or members of Congress was the
- A. Alien Act
 - B. Sedition Act
 - C. Coercive Act
 - D. Quartering Act

APPENDIX B

EIGHTH GRADE
THE AGE OF JEFFERSON: PRE/POST TEST TWO

Directions: Print the letter of the correct answer in the space before the number.

- _____ 1. Thomas Jefferson
 - A. wrote the Declaration of Independence
 - B. was the third President
 - C. founded the University of Virginia
 - D. both A and B
 - E. all of these

- _____ 2. As President, Thomas Jefferson's political programs included
 - A. lowered taxes
 - B. repeal of the excise tax on whiskey
 - C. defense cuts
 - D. all of these

- _____ 3. The amendment which requires that the President and Vice President be elected on separate ballots is the
 - A. 12th
 - B. 19th
 - C. 22nd
 - D. 25th
 - E. none of these

- _____ 4. The Twelfth Amendment was passed because
 - A. there was a tie vote between Jefferson and Burr and the House of Representatives had to choose
 - B. Great Britain and France tried to cut off each other's trade
 - C. the Alien and Sedition Acts had been passed
 - D. Marshall's decision hurt the Supreme Court

- _____ 5. Marshall's decision
 - A. declared the Alien and Sedition Acts unconstitutional
 - B. expanded the power of the supreme court
 - C. prevented Americans from traveling to foreign countries
 - D. provided for equal representation of both political parties

- _____ 6. The Louisiana Purchase
 - A. stretched from the Rocky Mountains to the Pacific Ocean
 - B. included all of the Spanish possessions in America
 - C. stretched from the Mississippi River to the Rocky Mountains
 - D. included all of the Northwest Territory

- _____ 7. The Louisiana Purchase was important because it provided
- A. control of the Mississippi River and the Port of New Orleans
 - B. access to the Ohio River
 - C. the Americans with a base from which to attack Mexico
 - D. an opportunity to convert Indians to Christianity
- _____ 8. Two explorers who commanded the expedition into the Louisiana Territory were
- A. Boone and Pike
 - B. Daniels and Robinson
 - C. Lewis and Clark
 - D. Burr and Marshall
- _____ 9. This Shoshone woman served as a guide and interpreter for the explorers of the Louisiana Purchase. Her name was
- A. Metacomet
 - B. Sacajawea
 - C. Milly Francis
 - D. Tecumseh
- _____ 10. _____ followed the Mississippi River almost to its source and explored the Colorado region
- A. Zebulon Pike
 - B. Meriweather Lewis
 - C. William Clark
 - D. Daniel Boone
- _____ 11. The Lewis and Clark Expedition was important because it
- A. defeated French forces in the Louisiana Territory
 - B. provided much scientific information for future explorers and settlers
 - C. defeated Indian tribes west of the Mississippi River
 - D. removed Spanish troops from California
- _____ 12. America's problems with Great Britain and France included
- A. French orders to stop trade between America and Great Britain
 - B. French threats to seize American ships stopping at British ports
 - C. British taxation of American ships
 - D. British kidnapping of American citizens and sailors
 - E. all of these
- _____ 13. The right of a country at peace to sail on any sea or ocean and trade with any nation is called
- A. neutral rights
 - B. embargo
 - C. judicial review
 - D. impressment

- _____14. British firing upon and searching an American ship was called the
A. XYZ Affair B. Chesapeake-Leopard Affair
C. Embargo Act D. none of these
- _____15. The law which forbade all American export trade with foreign nations was called the
A. Navigation Act B. Townshend Act
C. Embargo Act D. Gag Act
- _____16. The Embargo Act
A. halted sale of Southern tobacco and cotton
B. stopped New England trade and commerce
C. caused widespread smuggling
D. all of these
E. none of these

APPENDIX C

PANEL OF EXPERTS

1. Craig Chadwick
Social Studies
Math
2. Ardith Claeys
Social Studies Department Coordinator
Local Government
3. Charlie Cleveland
World Geography
4. Marie Farrell, Ph.D.
Staff Development Specialist
Social Studies
5. Barbara Furstenberg
Social Studies
Language Arts
6. Marsha Garlock
Social Studies
7. Marilyn Kane
U. S. History
TAG
8. Carol Loughner
U. S. History
9. Stan Pace
Vice Principal
U. S. History
10. Kenneth Wellman
Principal
Social Studies

APPENDIX D

LESSON OBJECTIVES AND TEST ITEMS
FOR SEVENTH GRADE TESTS

1. OBJECTIVE: TO LOCATE THE MIDDLE EAST ON A MAP OF THE EASTERN HEMISPHERE

___ Identify Africa, Asia, Europe, and the Middle East by placing the letter from the map in the space before the name.

Africa

Asia

Europe

Middle East

___ The Middle East is the crossroad where Europe, Africa, and Asia meet.

___ All of the countries of the Middle East are in Asia.

2. OBJECTIVE: TO IDENTIFY THE COUNTRIES OF THE MIDDLE EAST

___ Which country is not part of the Middle East?

A. Israel B. Iran C. Oman D. South Africa

___ Which country is not part of the Middle East?

A. Syria B. Turkey C. Ethiopia D. Iraq

___ Which Middle East country is in Africa?

A. Turkey B. Egypt C. Yemen D. Lebanon

3. OBJECTIVE: TO COMPARE THE SIZE AND POPULATION OF MIDDLE EAST COUNTRIES

___ The Middle East country with the largest land area is

A. Bahrain B. Afghanistan C. Saudi Arabia D. Iran

___ The Middle East country with the smallest land area is

A. Bahrain B. Turkey C. Saudi Arabia D. Egypt

___ The Middle East country with the greatest population is

A. Saudi Arabia B. Iran C. Iraq D. Egypt

4. OBJECTIVE: TO IDENTIFY THE MIDDLE EAST AS THE BIRTH-PLACE OF THREE OF THE WORLD'S GREAT RELIGIONS

___ Which of the following is not a religion that was born in the Middle East?

A. Christianity B. Judaism C. Islam D. Hinduism

___ Three great religions of the world born in the Middle East are Judaism, Christianity, and Islam.

5. OBJECTIVE: TO DESCRIBE ISLAM

___ Check the items that describe the followers of Islam.
 sacred book is the Koran
 sacred book is the Bible
 believes in one God, Allah
 believes in many gods
 follows the prophet, Mohammad
 Jerusalem is the center of religious activity
 faces Mecca and prays five times each day

___ Followers of Islam

- A. pray five times each day B. read the Koran
 C. believe in one God, Allah D. all of these

6. OBJECTIVE: TO DESCRIBE THE PEOPLE OF THE MIDDLE EAST

___ Only Arabs live in the Middle East.

___ Most Middle East people

- A. are Arab B. live in villages C. have extended families
 D. rent their land from wealthy landowners
 E. all of these

___ Which is not true of people of the Middle East

- A. speak Arabic B. live in large families C. male is head of household
 D. own most of their own land

7. OBJECTIVE: TO EXPLAIN THE IMPORTANCE OF OIL IN THE MIDDLE EAST

___ The natural resource the Middle East has the most of is

- A. water B. oil C. gold D. coal

___ The discovery of gold changed Saudi Arabia from a poor country to a wealthy, modern country.

___ Which of these natural resources has brought great wealth and modernization to countries of the Middle East?

- A. animals B. oil C. people D. water

8. OBJECTIVE: TO DEFINE CIVILIZATION

___ A society with organized government, religion, social classes, and writing is

- A. an empire B. a civilization C. a dynasty
 D. a guild

9. OBJECTIVE: TO IDENTIFY PALESTINE AS ISRAEL

___ Palestine, the land of the Hebrews, is
 A. Iraq B. Iran C. Israel D. Egypt

___ In ancient times, Israel was known as Mesopotamia.

10. OBJECTIVE: TO DESCRIBE AN ARCHAEOLOGIST

___ A person who studies the people, customs, and life
 of ancient times is
 A. an anthropologist B. a historian
 C. an archaeologist D. a specialist

___ Check the items which describe what an archaeologist
 does
 digs for pottery, tools, and buildings
 settles disputes between nations
 tries to piece together a picture of life in the past
 helps people who are in trouble
 studies ancient people's customs

11. OBJECTIVE: TO DESCRIBE LIFE IN UR

___ Life in Ur included
 A. learning to be a scribe in a temple school
 B. writing on a clay tablet
 C. walking through narrow, crooked streets
 D. A and B
 E. all of these

___ Which of these is not true of life in Ur?
 A. cuniform writing B. mud-brick houses C. writing
 on papyrus D. a temple for Nanna

12. OBJECTIVE: TO IDENTIFY THE CONTRIBUTIONS OF THE
BABYLONIANS

___ The people who invented a calendar and a system of
 astrology were the
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians

___ The Babylonians created a powerful Mesopotamian
 empire.

13. OBJECTIVE: TO IDENTIFY THE CONTRIBUTIONS OF THE
PHOENICIANS

___ The world traders who invented the alphabet were the
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians

___ The alphabet Americans used is based on the Phoeni-
 cian alphabet.

14. OBJECTIVE: TO IDENTIFY THE CONTRIBUTIONS OF THE HEBREWS

___ The people who developed a belief in one God were the
 A. Babylonians B. Phoenicians C. Hebrews
 D. Egyptians

___ The Sumerians were the first monotheists.

15. OBJECTIVE: TO RECOGNIZE HAMMURABI'S CODE AS THE MOST COMPLETE SET OF LAWS FOR MESOPOTAMIAN PEOPLE

___ Hammurabi's laws were based on Mesopotamian ways of behaving.

___ Hammurabi believed in "an eye for an eye and a tooth for a tooth".

___ Hammurabi's laws
 A. protected women and children
 B. were based on the communities accepted behaviors
 C. were outlawed
 D. both A and B

16. OBJECTIVE: TO DESCRIBE ANCIENT EGYPTIAN CIVILIZATION

___ Check the items that do not describe life in ancient Egypt
 pharaohs
 clay tablets
 Ur
 the moon god, Nanna
 many gods
 pyramids
 hieroglyphs

___ Ancient Egyptian civilization included
 A. a belief in one God B. writing on clay tablets
 C. a temple to the moon god, Nanna D. none of these

17. OBJECTIVE: TO DESCRIBE AN ARTIFACT

___ An artifact is anything made by humans.

___ Which of these is not an artifact?
 A. pottery B. belt buckle C. bones D. coke can

18. OBJECTIVE: TO IDENTIFY ANCIENT IRAQ

___ In ancient times, Iraq was called
 A. Palestine B. Persia C. Egypt D. Mesopotamia

___ Iran was called Mesopotamia in ancient times.

19. OBJECTIVE: TO EXPLAIN THE ARAB/ISRAELI CONFLICT

- ___ The Arab/Israeli conflict is the result of
- A. fights over oil rights
 - B. Arab and Jewish claims for the same land
 - C. religious differences
 - D. all of these

___ Israel gets along well with all her neighbors.

20. OBJECTIVE: TO RECOGNIZE GOLD MEIR

- ___ An American school teacher who was born in Russia and became the Prime Minister of Israel was
- A. Indiri Ghandi
 - B. Nkrumah
 - C. Golda Meir
 - D. Mohammad

___ Indiri Ghandi was Israel's Prime Minister.

APPENDIX D

LESSON OBJECTIVES AND TEST ITEMS
FOR EIGHTH GRADE TESTS

1. OBJECTIVE: TO IDENTIFY THE CHALLENGES FACED BY GEORGE WASHINGTON AS FIRST PRESIDENT

___ The challenges faced by President Washington were

- A. to set policy and direct the nation using his own best judgment
- B. to fill government positions with people who were "friends of the Constitution"
- C. to establish a cabinet of advisors as outlined in the Constitution
- D. both A and B
- E. A, B, and C

___ President Washington's challenges included establishing his cabinet as outlined in the Constitution with trusted loyal personal friends and setting a good example for other presidents to follow.

2. OBJECTIVE: TO DISTINGUISH BETWEEN EXCISE TAX AND REVENUE TAX

___ A tax on all imports to raise income for the federal government is

- A. a revenue tax
- B. an excise tax
- C. a sales tax
- D. an income tax

A tax on goods manufactured within our country is

- A. a revenue tax
- B. an excise tax
- C. a sales tax
- D. an income tax

___ A tax placed on manufactured goods is an excise tax whereas, a tax on imports is a revenue tax.

3. OBJECTIVE: TO DEFINE THE MEANING OF HAMILTON'S INTERPRETATION OF IMPLIED POWERS OF THE CONSTITUTION

___ Constitutional powers that are suggested by the wording of the Constitution are called

- A. civil liberties
- B. implied powers
- C. home rule
- D. martial law

___ Implied powers are clearly stated in the Constitution.

4. OBJECTIVE: TO DESCRIBE THE ORIGIN OF POLITICAL PARTIES
IN AMERICA

___ Political parties in America

- A. were established by the Constitution
- B. were developed by George Washington
- C. were an outgrowth of the differing beliefs of Jefferson and Hamilton

___ Political parties in America were established by the Constitution and approved by George Washington.

___ The strong opposing political views of Jefferson and Hamilton led to the establishment of political parties in America.

5. OBJECTIVE: TO IDENTIFY THE DIFFERENCES BETWEEN THE
FEDERALIST AND REPUBLICAN POLITICAL PARTIES

___ The Federalist political party

- was led by Jefferson
- was led by Hamilton
- spoke for small farmers and working class people
- represented bankers, merchants, manufacturers and large landowners

___ Republicans believed government should be left to the educated and wealthy whereas, Federalists believed the common person could govern wisely.

___ Federalists believed only educated and wealthy persons could govern wisely.

6. OBJECTIVE: TO IDENTIFY THE PROBLEMS FACED BY JOHN ADAMS
AS PRESIDENT

___ President John Adams' problems included

- A. having his presidential opponent for vice president
- B. establishing a cabinet of loyal friends as outlined in the Constitution
- C. winning by only a narrow margin
- D. all of these

___ Although Adams and Jefferson were opponents in the presidential race they agreed on all major issues.

7. OBJECTIVE: TO DESCRIBE THE TERMS OF THE PINCKNEY TREATY

___ In 1795, Thomas Pinckney negotiated an important treaty with Spain that allowed Americans to

- A. use the Mississippi River and the port of New Orleans without fear of interference
- B. trade with the Spanish colonies in North and South

- C. move into Florida
- D. use Spanish vessels to transport goods to France and Britain

_____ America acquired use of the Mississippi River and the Port of New Orleans without fear of interference from Spain as a result of

- A. the XYZ Affair
- B. the Treaty of Paris
- C. the Pinckney Treaty
- D. the Greenville Treaty

8. OBJECTIVE: TO DESCRIBE THE ALIEN AND SEDITION ACTS

_____ The act which gave the President power to order suspicious persons who were not citizens of the U.S. to leave the country was the

- A. Alien Act
- B. Sedition Act
- C. Coercive Act
- D. Quartering Act

The act which said that Americans could be fined or jailed if they criticized the President or members of Congress was the

- A. Alien Act
- B. Sedition Act
- C. Coercive Act
- D. Quartering Act

_____ The Alien and Sedition Acts interfered with American freedom of speech and rights to citizenship.