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PRESENTATION METHODS, DELETION PATTERNS, AND PASSAGE
TYPES FOR USE WITH AURAL CLOZE

by

Barry Lynn Nutter

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF READING
In Partial Fulfillment of the Requirements
For the Degree of
DOCTOR OF EDUCATION
In the Graduate College
THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my
direction by Barry Lynn Nutter
entitled PRESENTATION METHODS, DELETION PATTERNS, AND
PASSAGE TYPES FOR USE WITH AURAL CLOZE
be accepted as fulfilling the dissertation requirement of the
degree of DOCTOR OF EDUCATION

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January 14, 1974
Date

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*This approval and acceptance is contingent on the candidate's
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SIGNED: _____

Barry L. Putter

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For my three favorite people:

Marie, Geoffrey, and Ethan

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ABSTRACT

The purpose of this study was to investigate the use of aural cloze as a testing procedure. Of major interest were the issues of deletion patterns, methods of presentation, and the effect of passage type.

To this end, the researcher was interested in answering the following questions concerning seventh grade students.

1. What effect does an initial preview presentation have on aural cloze scores?
2. What effect does a repeated testing have on aural cloze scores?
3. Is there a difference between the aural cloze scores obtained by students on a fiction passage and on a nonfiction passage?
4. What effects do different deletion patterns have on the aural cloze scores?
5. Are there differences in the reliability of aural cloze scores when differing deletion patterns are employed?
6. How do initial preview-final review procedures and type of context interact with particular deletion patterns on an aural cloze exercise?

The subjects for this study were selected from the seventh grade language arts classes of a junior high school in a lower-middle class area of Tucson, Arizona. The final sample consisted of 311 students each of whom was assigned to one of eight treatment groups.

The instruments for the collection of data consisted of four tape recorded passages and answer booklets. Two tapes contained the same fiction passage with every fifth word deleted on one and every tenth word deleted on the other. The other two tapes contained the same nonfiction passage with every fifth word deleted from one tape and every tenth word deleted from the other. The tapes were used so as to enable the examiner to obtain differing combinations of deletions, passage types, and presentation procedures for each treatment group.

The students were instructed to listen to the tapes and write the words they thought the author had used for every word deleted.

The data were analyzed by use of a four factor analysis of variance. Reliabilities of the tests were also assessed.

The data analysis techniques yielded these findings.

1. Deletion pattern was a significant factor. Different deletion patterns produced differences in reliability.

2. Presentation and testing procedure were both significant factors.
3. Passage type was a significant factor.

The findings of the study supported these conclusions.

1. A given deletion pattern employed in an aural cloze exercise may yield an instrument substantially different in reliability and difficulty than another deletion pattern.
2. Differing methods of presentation of the aural cloze procedure may yield instruments quite different in terms of difficulty.
3. Different types of material employed in the aural cloze procedure may yield instruments that differ in difficulty more than readability formulas would indicate.

The conclusions arrived at in this study suggested the following implications.

1. The decision as to which particular deletion pattern should be used must be based upon the purposes for the aural cloze exercise.
2. The need for more exposure to the material presented in aural cloze is clearly indicated.
3. When selecting material for constructing a cloze test, type of content needs to be taken into consideration.

CHAPTER I

THE PROBLEM AND DEFINITION OF TERMS USED

The assessment of comprehension of material received aurally has long been a concern of many researchers and educators. Instruments that have been developed as a result of this concern are often too long or cumbersome to be readily employable. This lack of adequate listening comprehension tests is important to people in the field of reading for listening ability has long been discussed as a possible determinant of reading capacity (Harris 1962, Johnson and Kress 1965).

It appears that those interested in the assessment of listening ability have ignored certain promising new techniques. For example, although the cloze procedure has proven to be of considerable value in reading, it has been applied only haphazardly to listening. It would seem that the development of a procedure for utilizing cloze in a listening situation could prove to be of great value.

Significance of the Study

There has long existed a need for estimating a child's ability to comprehend material that has been presented to him orally. This need has been seen in the areas of speech, psychology, language arts, and as a major

offshoot of these, in reading. In reading, measures have been employed which attempted to assess a child's ability to comprehend material listened to with the purpose of estimating the child's potential reading level (Betts 1946).

The research that has been done with listening has followed traditional lines of having the child listen to a passage and then asking him a series of comprehension questions over that passage. The basic inadequacy with this type of measure has been outlined by Lorge (1949): "The comprehension of a text, therefore, is measured, in part, by the response to the questions set for it. Such questions may vary not only in the level of language used, but also in the level of concepts considered" (p. 89). Therefore, it can be seen that how a child performs on the comprehension questions over a passage may, to a large degree, be dependent on the types of questions asked.

It was in an attempt to deal with this problem on a reading level that the cloze procedure was developed. Cloze has been used extensively in reading comprehension research and many of its basic components have been closely investigated. There have been some sporadic attempts to use this highly successful technique of reading comprehension to measure listening comprehension. However, these studies have used the procedure in an attempt to arrive at some factor of comprehension when a number of procedural matters have not been established.

It seemed worthwhile, therefore, to conduct a study that would deal with the basic properties of using cloze in a listening situation. This was done with the idea of establishing a procedure that could be used by future researchers. Also, a technique such as this could prove to be of considerable value in the development of listening skills.

The Problem

The purpose of this study was to investigate the use of aural cloze as a testing procedure. Of major interest were the issues of deletion patterns, methods of presentation, and the effect of passage type.

To this end, the researcher was interested in answering the following questions concerning seventh grade students:

1. What effect does an initial preview presentation have on aural cloze scores?
2. What effect does a repeated testing have on aural cloze scores?
3. Is there a difference between the aural cloze scores obtained by students on a fiction passage and a non-fiction passage?
4. What effects do different deletion patterns have on aural cloze scores?

5. Are there differences in the reliability of aural cloze scores when differing deletion patterns are employed?
6. How do initial preview-final review procedures and type of context interact with particular deletion patterns on an aural cloze exercise?

Definition of Terms

The following definitions are supplied to enable the reader to better understand the use of the specialized terms used in this study.

1. Cloze. A method of intercepting a message from a "transmitter" (writer or speaker), mutilating its language patterns by deleting parts, and so administering it to "receivers" (readers or listeners) that their attempts to make the patterns whole again potentially yield a considerable number of cloze units (Taylor 1953, p. 416).
2. Aural Cloze. A cloze passage constructed to be completed by a listener (Weaver 1961, p. 20).
3. Listening Comprehension. The highest level of readability of material which the learner can comprehend when the material is read to him (Betts 1946, p. 452).
4. Deletion Pattern. A term denoting what procedures shall be used in determining which words are to be

omitted from a cloze passage. For example, a five deletion pattern means that every fifth word is to be omitted from the passage. This would mean that starting with the fifth word in the passage, the tenth, fifteenth, twentieth, etc., would be omitted.

Assumptions

Students were not familiar with the passages used in the instruments.

Limitations

1. Only seventh grade students were used.
2. Only one junior high school from the city of Tucson, Arizona, was used in this study.
3. The sample size was limited to 311 students.
4. The same two passages were used for all testing.
5. Only two selections and styles of prose material were utilized.

CHAPTER II

REVIEW OF THE LITERATURE

Literature found to be pertinent to this study is reviewed in this chapter under the following headings: (1) Literature Relating to the Cloze Procedure and Reading, (2) Literature Relating to Aural Cloze, and (3) Summary.

Literature Relating to the Cloze Procedure and Reading

The literature on the use of the cloze technique has already been extensively surveyed by Rankin (1965) and by Bickley, Ellington, and Bickley (1970). Therefore, the investigator's review is not an in-depth analysis of all cloze studies but rather a highlighting of certain significant findings.

Fletcher (1955) among others, has demonstrated that the cloze procedure is a valid measure of reading comprehension. MacGinitie (1961) suggested that a deletion pattern of one word deleted in every five gave the best results. Bormuth (1965a) added more research to the cloze technique by finding that scoring only the exact word as correct gave the best results as far as reliability and ease of scoring were concerned.

In other aspects of cloze, Bormuth (1965b) has done extensive research in establishing the optimum sample size for testing as well as the desirable test length. Throughout these studies, the age of the populations used for cloze research has remained at the fourth grade level and above. Rankin and Culhane (1969) used upper elementary school children, Bormuth (1965b) used fourth through eighth graders, and, again, Bormuth (1969) used fourth through sixth graders.

Literature Relating to Aural Cloze

Although the cloze technique has been applied to listening (aural cloze) in several studies, there has yet to be a sound basis for the particular techniques employed. Most studies have used aural cloze as a means of getting at some other variable, for example, listening ability in specific situations, but none have dealt specifically with the technique itself.

The use of cloze to measure a listener's comprehension of material was first attempted by Taylor (1956). In this study Taylor wanted to ascertain whether it was easier to comprehend radio broadcasts that were delivered in easily understood English or those which employed "tortured prose," which, though somewhat clumsy, was grammatically correct. Taylor deleted every fifteenth word from a taped presentation. For each deletion, a buzzer was substituted for a four second period while another voice spoke a number which

had been assigned to each deletion. The subjects were required to write the word that should have filled the deletion.

Weaver (1961) studied characteristics of language intended for oral and written presentation. He utilized the cloze procedure by mixing his deletions, providing a deletion of every tenth noun or main verb for three lines followed by three lines in which he deleted every tenth word. This mixed deletion pattern was repeated throughout the passage. The passages were taped with a four second pause allowed for each deletion. A buzzer was sounded at each pause, and at every fifth pause the number of the deletion was announced during the pause.

The tape was first played for the subjects in its entirety. Following this, subjects were allowed to ask for the repetition of any sentence by asking for the deletion number in that sentence. The examiner would read this sentence for the students and there was no limit to the number of repetitions. When there were no more requests for repetitions, the tape was again run in its entirety.

Weaver found that the repetitions of the passages increased the students' abilities to predict the missing words.

With respect to the two types of deletion patterns employed by Weaver (structural: every Nth word, and lexical: every Nth noun or main verb), Jongasma (n.d.) has

written, "The every-fifth deletion approach assumes that because of semi-random sampling, a representative number of structural elements as well as lexical elements, will be deleted in each passage" (p. 8).

Weaver's procedure was later used in another study exploring performances on both reading and aural cloze tests (Weaver and Kingston 1963). Again, this study was not concerned with developing the aural cloze procedure, but utilized this procedure for the study of different aspects of vocabulary, language aptitude, and reading ability.

Deutsch (1964) employed the aural cloze procedure to measure the comprehension that first and fifth grade children had of their teacher's speech. Only the procedure used with the fifth grade was of relevance to the present study.

Deutsch used a group procedure in which he tested five to ten children during each session. He first taped fifth grade teachers' speech, getting samples approximately fifty words in length. From this he deleted every fifth word. The children first listened to the entire tape including periods of silence which indicated something had been deleted. After the tape had been played, it was immediately replayed. At each deletion (indicated by a period of silence the length of which the author failed to designate) the children were to write the word they thought had been deleted. Deutsch outlined a very careful testing

procedure for his examiners in order to maintain consistent test administrations.

In another study, Dickens and Williams (1964) used the aural cloze procedure as a technique for measuring the comprehension of spoken materials. They used much the same procedure as had been previously used in other studies. The listening passages were taped from the listening tests of the Sequential Tests of Educational Progress (1957). In the first tape, random noise replaced a word each five seconds. On the second tape, which also used the random noises for the cloze deletions, five-second silent periods for recording answers were spliced in at the end of each sentence. The authors explained that the pause at the end of the sentence was based on a previous pilot study by Williams (1962) which showed that response periods introduced within sentences altered intonation patterns and thus led to syntactic ambiguity. To compensate for this, Dickens and Williams (1964) chose to first let the listeners hear the total selection with the mutilation pattern imposed and then hear the selection a second time with response periods placed between sentences.

This use of aural cloze was found to be a "useful technique for measuring the comprehension of oral messages in the present experiment" (Dickens and Williams 1964, p. 105). The authors went on to state that ". . . cloze scores may be more sensitive to individual differences and less

dependent upon the type of message than are multiple choice scores" (p. 106). This statement, along with the relatively high reliability found for this procedure, led them to suggest the potential value of the aural cloze as a comprehension measure for oral materials.

Kennedy (1971) also employed an aural cloze technique in her doctoral study of listening comprehension. She used sentences in which one word had been deleted and a bell was rung in place of the deleted word.

The use of aural cloze has been referred to by Bickley et al. (1970) who reviewed studies in the use of cloze in listening situations in their overall survey of cloze research. They noted the possibility of developing cloze measurements of oral language. This idea was also expressed in Rankin's (1965) survey in which he concluded that ". . . the cloze procedure is a useful technique for the study of listening" (p. 140).

Summary

The cloze research studies that have been concerned with reading have demonstrated that the cloze procedure is a valid measure of reading comprehension. Also, a pattern of one word deleted in every five and the scoring of only an exact word replacement as correct have been found to yield the most reliable results. Optimum sample size has also received consideration. Throughout these studies, the age

of the populations used have remained at the fourth grade level and above.

From the reported studies it can be seen that aural cloze is a technique that has been used in research. However, none of the studies reviewed focused on matters dealing with the actual process of developing a technique for using aural cloze. Most authors merely stated their deletion patterns and methods of presentation with no defensible basis in aural cloze research to substantiate their selections. It would then seem reasonable that a wise course of action would be to first arrive at a technique that has been shown to be promising. This would then allow future researchers the use of a more standard measuring technique rather than assuming a different one for each study.

CHAPTER III

DESIGN OF THE STUDY

This was a descriptive study designed to investigate various aspects of the aural cloze procedure. Pursuant to that end, two deletion patterns and presentation procedures as well as a comparison of two types of content were studied.

Sample

The subjects in this study were enrolled at Apollo Junior High School, located in the southern section of metropolitan Tucson, Arizona. Apollo is attended by a total student population of about 1209 in grades seven through nine. According to data obtained by a civil rights survey conducted in October, 1972, approximately 54% of the student body was of Mexican descent (based on Spanish surnames), 44% were classified as "other," and the remaining 2% was composed of Blacks, American Indians, and Orientals. Based on the 1970 census tract information, the average socio-economic status of those who reside within the enrollment boundaries of Apollo is lower-middle class.

From the total school population, only those students who were enrolled in the seventh grade language arts classes were tested. These language arts classes

consisted of randomly assigned students who were judged, by their teachers, to have adequate language capabilities. Seventh grade students not in the language arts classes were assigned to English As A Second Language classes.

The total number of language arts classes utilized for this study was sixteen, yielding a potential sample of 359 students. Excluding those who were absent on the day of testing, the final sample used for this study was 311 subjects.

Seventh grade students were selected for this study based on research by Russell (1928), Young (1936), Spache (1963), and Durrell (1969), all of whom concluded that it is at approximately this level that listening ability is equalled by reading ability. Based on this information a passage which had been assigned a readability level could be selected for listening that the examiner could be relatively certain would fall within the seventh grade students' listening capabilities.

Instruments

Description of the Listening Passages

In order to compare two different types of content, two passages, one fiction and one nonfiction, were selected for testing. An attempt was made to obtain newly released books to lessen the chances that any of the students might be familiar with the passages.

The fiction passage was taken from Go Up the Road (Lampman 1972). The passage selected was composed of 186 words which came from the front of the book and contained no references to other people or events not described in the passage itself. Application of the Dale-Chall (Chall and Dale 1948) readability formula to the passage placed it at a reading level of fifth grade. The passage appears in its entirety in Appendix A.

The nonfiction passage was taken from the Intermediate Level A text of the Ginn Science Program (Gallant and Asimov 1973). This passage of 178 words was concerned with motion and the portion that was used contained no references to material which was not in the passage itself. The Dale-Chall (Chall and Dale 1948) formula was also applied to this passage and the level was indicated to be at fifth grade. The passage appears in its entirety in Appendix B.

Based on a suggestion by one of the classroom teachers associated with this study, the science passage was changed to read "baseball," whenever the word "ball" appeared. This did not alter the readability level and was thought necessary by all teachers concerned to eliminate the likelihood of adverse connotations being applied to the word.

The use of a fifth grade level of passage with seventh grade students was decided upon in an attempt to

give a greater number of students an opportunity to achieve success with the task. The investigator assumed that the newness of this type of task and the fact that it was a listening test, which would not allow the student to refer back to the passage to answer questions, would increase the difficulty level of the task.

Description of the Cloze Tests

The two deletion patterns investigated in this study were every fifth word and every tenth word. The five-deletion pattern was selected based on past research by MacGinitie (1961), who suggested this to be the optimum deletion pattern for written cloze. The present investigator believed that more context could be needed for a listening activity because the listener would not be able to refer back to previous material as he listened. Therefore, a ten-deletion pattern was also used to study the effect of adding more context between deletions.

For the fiction passage (Go Up The Road) the first two sentences were left intact to lead into the article because they were used to set the scene for the story. In the nonfiction passage (hereafter referred to as "Baseball") only the first sentence was left intact.

Beginning immediately after the above mentioned intact sentences, each word was counted. For the five-deletion passages every fifth running word was deleted.

This yielded a cloze test for both passages containing 32 deletions each.

This procedure was followed for the ten-deletion passages in which every tenth running word was omitted. This yielded a cloze test for both passages containing 16 deletions each. Copies of the four testing passages are contained in Appendix C.

The above procedure yielded the following testing passages.

1. Go Up The Road: 5-deletion passage: 32 words omitted.
2. Go Up The Road: 10-deletion passage: 16 words omitted.
3. "Baseball": 5-deletion passage: 32 words omitted.
4. "Baseball": 10-deletion passage: 16 words omitted.

Description of Tape Preparation

Due to the necessity of using three different examiners for this study, the four different aural cloze tests were all taped to provide a consistent instrument for testing. Taping was conducted in the sound studio of The University of Arizona, Bureau of Audiovisual Services.

The investigator read each passage for taping. Each time a word was deleted, the investigator would pause while an assistant substituted a two second buzz at a 500 cycle square wave frequency. During this buzz, the assistant

would say the number (the deletions were consecutively numbered) that had been assigned to each deletion. The purpose for numbering the deletions was to assist the students in recording their answers in the proper place in their test booklets.

Once the four testing passages had been taped a new tape was made of each to allow a five-second silent period at the end of each sentence for each deletion contained in that sentence. The audiovisual assistant accomplished this by splicing in blank tape at the end of each sentence. This silent period was provided to allow the students time to record their answers in their answer booklets.

The end product was one tape for each passage that contained that passage in its entirety three times. The first time the passage appeared on the tape it was read completely through with only the numbered deletions and buzzer inserted. This was designated as the Preview Presentation. The second recording of the passage contained the same selection but with five-second silent periods spliced in at the end of each sentence for each deletion contained in that sentence. This was designated as the Testing I Presentation. The third presentation of the passage was exactly the same as the Testing I Presentation and was designated as the Testing II Presentation. The Testing II Presentation was included to allow the students an opportunity to change their answers from the Testing I

Presentation or to complete any previously uncompleted deletions. All four tapes were set up in the order of Preview, Testing I, Testing II.

Description of Test Booklet

The test booklet consisted of three pages. The front page was a data sheet that required the student to fill in a variety of information. A copy of the frontsheet is contained in Appendix D.

The purpose of the frontsheet was twofold. First, it provided coding information to the examiner that prevented any possible confusing of the answer sheets. Second, it was used to prepare the students by establishing a "set" for listening. It was hoped that listening to the examiner for the instructions for filling in the frontsheet would act as a warm-up for the listening test.

Pages two and three of the answer booklet were identical. These sheets contained two columns, designated as Column I and Column II. Each column contained identical, numbered lines of 16 or 32 depending on which deletion pattern was used. Column I was used for recording answers to Testing I and Column II was used for Testing II. A copy of page two of the test booklet is contained in Appendix E.

Pilot Study

On April 10, 1973, the investigator conducted a pilot study to determine solutions to the following problems,

1. Could seventh grade students follow the instructions for this new testing procedure?
2. Were the passages used for the tests appropriate in difficulty?
3. Would the students be able to understand what was expected of them and complete the task?
4. Were the passages read at an appropriate rate?
5. Was the five-second break for each deletion long enough to enable students to record their responses?
6. Would the use of the buzzer and number system distract the students or help them?
7. How long would the total testing period last?

For the pilot study a seventh grade English class of 28 students was used. The students were all enrolled at Sunnyside Junior High School, which was in the same district as the school used for the major study. According to the classroom teacher, the reading level of the students ranged from second through fourth grade. It was assumed that, if these students could do the task, a larger, randomized population could also.

In a pilot study with only one group it was impossible to utilize all of the possible testing procedures. Therefore, one of the eight possible combinations of deletions, passage types and order, and presentations was randomly selected. The tests used were first the

ten-deletion passage Go Up The Road in a Testing I-Testing II presentation, and second, the ten-deletion passage "Baseball" in a Preview-Testing I-Testing II presentation.

Once the booklets and pens had been distributed, the examiner began by reassuring the students that the test would have no bearing on their class grades or school evaluation.

The examiner then proceeded to read, verbatim, from the "Examiner's Testing Format Sheet" that had been previously prepared. A copy of this format sheet appears in Appendix F. Once the instructions were read, questions were allowed.

The first tape was then played using only the Testing I passage while the students wrote their answers with red pens. Once this had been completed, the examiner read the instructions which preceded Testing II, allowed questions, and then played the Testing II portion of the tape. The students used black pens for this test.

The students were then requested to turn to the second answer sheet. Next, they were read the instructions which preceded the Preview section of the tape "Baseball." Then the Preview presentation of the tape was played, during which time the students were requested to sit and listen.

Once the Preview had been played, the examiner continued with Testing I and Testing II exactly as outlined on the "Examiner's Testing Format Sheet."

After the testing was completed, the students were asked for comments. They were allowed to respond verbally or by writing on the front of the test booklet.

Most of the reactions seemed to be that the test was interesting and even "fun." A few students commented that they were confused at first but quickly caught on.

The results from the pilot study indicated the following:

1. Seventh grade students of low reading ability could follow the instructions for this new testing procedure. Some had slight difficulty as the first tape began, but they quickly adjusted.
2. The two passages at a fifth grade level of readability did not seem to be too difficult for this group. The range of scores on the first passage was 0-6 on Testing I and 1-8 on Testing II with means of 2.5 and 3.8 respectively. On the second passage the range of scores was 2-12 on Testing I and 3-13 on Testing II. The means for these two tests were 6.8 and 8.1 respectively. These scores represent the number of answers correct of the 16 deletions contained in each passage.
3. Based on the ability of the students to fill the deletions and to follow the testing procedure satisfactorily, it was concluded that the students could handle the task.

4. Speed of presentation of the passages did not seem to be a problem. A few students stated that the passages were read too rapidly at first, but they thought that once they "caught on" the speed was acceptable.
5. Based on observation, student performance, and positive student comments, the five-second silent period for each deletion was judged to be satisfactory.
6. Students stated that the buzzer was somewhat distracting but thought the numbering was necessary. It was decided to leave the buzzer on the tapes since the students did not see it as a major difficulty.
7. The total time used for the entire testing period was less than 40 minutes. It was concluded that this would be the outside limit due to the examiner not having used this procedure with a class before.

Based on findings from the pilot study, the examiner concluded that the tapes and testing procedures were appropriate for seventh grade students. It was therefore decided not to change the tapes or procedures prior to the actual study.

Administration and Scoring of Tests

Description of Materials

The examination materials used for the major study were the same as those for the pilot study, with only slight revisions in the instructions to fit the order of presentation. The examiners were provided with the four tapes, Wollensak tape recorders, and red and black pens. The purpose of the different colored pens was to allow for the definite separation of responses on Testing I from those on Testing II. Red pens were always used for writing answers on Testing I and the black pens were used for Testing II.

The examiners were also provided with a testing packet for each testing period which included the test booklets and the "Examiner's Testing Format Sheet" for the particular procedures to be followed. Following the testing period, the examiners resealed the booklets in the testing packets.

Assignment of Groups to Treatments

The subjects used for this study had been randomly assigned to the 16 language arts classes used.

The restraints of the school required that the classes remain intact, thereby eliminating the possibility of assigning individual students to treatment groups. The examiner, therefore, assigned each intact class to a treatment group. The first step in the procedure was to

rank the 16 classes on the basis of enrollment from largest to smallest. In an attempt to obtain eight treatment groups comparable in size, the largest class and the smallest class were combined. This group was designated as Group R. The next largest and smallest class was combined to form Group S. This same procedure was followed for the remaining groups T, V, W, X, Y, and Z yielding eight groups ranging in size from 35 to 46.

To each group a deletion pattern was first randomly assigned. Following the assignment of deletion patterns to all groups, presentation procedures were randomly assigned.

There were two major procedures that were used for this study.

Procedure I (P-T-T). Preview: On the first presentation the passage was played in its entirety with buzzes substituted for deleted words and the number of each deleted word announced.

Testing I: The entire passage was played in the same manner as in the Preview except that a five-second pause was inserted at the end of each sentence for each deletion contained in that sentence. Students were instructed to write their responses in Column I with red ink.

Testing II: This was exactly the same as Testing I. For this testing the students were requested to write their answers in Column II with black ink if they wished to change

their answer in Column I or if they did not write an answer for the first testing.

Procedure II (T-T). This procedure was the same as the testing portion of Procedure I. The students thus received Testing I and Testing II without the Preview.

Through various combinations of deletion patterns, passage types, order of presentation, and presentation procedures, eight different treatments were devised for the eight groups. Table 1 contains a listing of the eight treatments.

Testing Schedule and Examiners

On April 18, 1973, a team of three examiners conducted the testing for this study. The entire testing was accomplished in one day.

The two examiners, in addition to the investigator, were advanced graduate students in reading at The University of Arizona. Both examiners had been thoroughly trained in the testing procedures by the investigator prior to the testing. The examiners were randomly assigned to each testing period. Each of two examiners tested seven classes while the third examiner tested two classes.

Testing was conducted in the students' regular language arts classes at the beginning of the period. The time for each testing session was approximately 35 minutes with the remainder of the period being used for discussion

Table 1. Listing of Treatment Groups

Group	N	Deletion Pattern	First Selection	Procedure	Second Selection	Procedure
Z	46	5	ROAD	P-T-T	BASEBALL	T-T
S	37	5	ROAD	T-T	BASEBALL	P-T-T
Y	39	5	BASEBALL	P-T-T	ROAD	T-T
X	41	5	BASEBALL	T-T	ROAD	P-T-T
W	39	10	ROAD	P-T-T	BASEBALL	T-T
T	38	10	ROAD	T-T	BASEBALL	P-T-T
V	35	10	BASEBALL	P-T-T	ROAD	T-T
R	37	10	BASEBALL	T-T	ROAD	P-T-T

of the testing procedure or, in some cases, the resumption of regular classroom activities.

Test Instructions

Once the classroom instructor had taken roll, the examiner was introduced. The examiner did what he could to assure the students that the test would not affect their class grades, nor would the results be available to the school.

The examiner then distributed the examination booklets and the pens. The testing commenced with the examiner reading the instructions from the "Examiner's Testing Format Sheet" and playing the tapes. The format sheet varied slightly for each treatment group to accommodate the procedure and order of presentation being employed. The format sheets encouraged the examiners to stress to the students the importance of writing their answers in the correct columns with the correct color of ink.

Once the testing was completed, the answer sheets and pens were collected, the answer sheets were resealed in the test packet, and the examiner thanked the students for their cooperation.

Scoring

Following completion of testing, the investigator scored all tests. For purposes of scoring, only words that exactly matched the deleted words were counted as correct.

Misspellings were not penalized and were scored correct if the investigator could recognize the misspelling as a correct response.

Each correctly inserted word was credited with one point. There were two scores on each passage presented, one each for Testing I and Testing II with a total of four scores for the two passages. Answers were only scored correct in each column if they were in the correct color of ink.

Tests on which no answers were correct or on which the directions were not followed (only one test) were included in the total due to one of the expressed purposes of the study being to investigate the testing technique itself.

Analysis of Data

Analysis of Variance

The test data were analyzed by use of a four factor analysis of variance with one factor being repeated measures. The three "between" measures analyzed were: (A) Fiction vs. Nonfiction, (B) Preview vs. No Preview, and (C) 5-Deletion vs. 10-Deletion.

The first two are not pure between measures in that the subjects were included in more than one of the cell combinations of (A) and (B). No subject was involved in all cell combinations of (A) and (B), a requirement of a

pure repeated measures design. Treating these variables as between measures rather than within measures produces a conservative test; that is, it biases the study in favor of retaining null hypotheses. With the large sample size it was decided that the test had sufficient power to detect any differences of practical significance.

The within measure was (D) Testing I vs. Testing II. Measure D is a true within variable in that all subjects are included in all levels of D.

For purposes of the analysis, the scores from the 10 deletion passages were doubled. The rationale for this was that this would yield comparable raw scores to the 5-deletion passages. An .05 level of significance was selected.

Post Hoc Test

The Tukey formula (Glass and Stanley 1970, p. 385) was employed as a post hoc test to investigate the significance of the reported differences from the above measure. The Tukey formula appears below.

$$(X_{.j} - X_{.j^*}) \pm 1 - \alpha q_{J, J(n-1)} \sqrt{MS_w/n}$$

Table F, Percentile Points of Studentized Range, q, Distributions for J and v Degrees of Freedom (Glass and Stanley 1970, p. 530) was used to determine statistical significance. Since such tables stop at 120 df and the two different degrees of freedom used in this study were 613 and

614, a q of 3.685, the values on $df = 120$, was assumed for purposes of this test. This also provides a conservative test.

Internal Consistency

The aural cloze scores on Testing I and Testing II were further analyzed for internal consistency by following Mosier's formula for estimating reliability from half-length tests (Lindquist 1951, p. 581). Like tests were combined regardless of the order of presentation or whether they had been preceded by a preview. This yielded eight sets of test scores to be analyzed. A reliability coefficient was computed for each of the following groups:

Road	5-deletion	Testing I
Road	5-deletion	Testing II
Baseball	5-deletion	Testing I
Baseball	5-deletion	Testing II
Road	10-deletion	Testing I
Road	10-deletion	Testing II
Baseball	10-deletion	Testing I
Baseball	10-deletion	Testing II

The scores for each group were divided into odd and total item scores. The following formula was used to compute the correlation coefficient between the odd and total scores for each test:

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}} \quad (\text{Glass and Stanley, 1970, pp. 113-114})$$

The following formula, devised by Mosier for use with half-length tests provided the estimates of reliability.

$$r_{1+2} = \frac{4(S_1 S_t r_{1t} - S_1^2)}{S_t^2} \quad (\text{Lindquist, 1951, p. 581})$$

The following formula devised by Feldt was employed to test for significant differences between reliability coefficients.

$$W = \frac{1 - r_2}{1 - r_1} \quad (\text{Feldt, 1969})$$

CHAPTER IV

FINDINGS

This chapter is organized under the following headings: (1) The Problem, (2) Reliability of the Aural Cloze Instruments, (3) Analysis of Variance, (4) Post Hoc Test and Discussion of Interactions, and (5) Discussion of Main Effects.

The Problem

The purpose of this study was to investigate the use of aural cloze as a testing procedure. Of major interest were the issues of deletion patterns, methods of presentation, and the effect of passage type.

To this end, the researcher was interested in answering the following questions:

1. Are there differences in the reliability of aural cloze scores when differing deletion patterns are employed?
2. What effect does an initial preview presentation have on the aural cloze scores of seventh grade students?
3. What effect does a repeated testing have on the aural cloze scores of seventh grade students?

4. Is there a difference in the aural cloze scores obtained by students on a fiction and a nonfiction passage?
5. What effects do different deletion patterns have on the aural cloze scores of seventh grade students?
6. How do initial preview-final review procedures and type of context interact with particular deletion patterns on an aural cloze exercise?

Reliability of the Aural Cloze Instruments

The issue of reliability was raised by question 1 under The Problem: Are there differences in the reliability of aural cloze scores when differing deletion patterns are employed? An application of Mosier's formula (Lindquist, 1951, p. 581) for use with half-length tests provided the estimates of reliability which are expressed in Table 2.

Table 2. Reliability Coefficients for Test Instruments

Test		Reliability Coefficient
Road	5-deletion, Test I	.8750
Baseball	5-deletion, Test II	.8702
Baseball	5-deletion, Test I	.8664
Road	5-deletion, Test II	.8652
Baseball	10-deletion, Test I	.7153
Baseball	10-deletion, Test II	.6934
Road	10-deletion, Test II	.5650
Road	10-deletion, Test I	.5475

The reliability coefficients of the test instruments, located in Table 2, present a range of .5475 to .8750. From an inspection of Table 2 it can be seen that the reliability coefficients for the 5-deletion passages, regardless of whether Testing I or Testing II was considered, are higher than those for the 10-deletion passages. Not only were all values for the 5-deletion passages higher, but the range of the values (.8652 to .8750) was considerably less than that for the 10-deletion passages (.5475 to .7153).

Based on the above reported data it can be stated that there is a difference in the reliability of aural cloze scores when differing deletion patterns are employed. The difference lies in favor of the 5-deletion passages.

Feldt's (1969) formula was employed to analyze the significance of the differences in reliability coefficients between the 5-deletion and 10-deletion passages. The lowest reliability coefficient for the 5-deletion passage (.8652) was compared to the highest reliability coefficient for the 10-deletion passage (.7153). The results of this analysis indicated a difference that was significant at the .01 level. The difference in reliability is more than would be expected to be the result of the larger sampling of items by the 5-deletion procedure.

The Spearman-Brown prophecy formula (Downie and Heath, 1970) applied to the highest reliability of the

10-deletion passages produced a value of .84, which is less than the obtained lowest value for the 5-deletion patterns. This means that doubling the length of the 10-deletion passages would probably not increase reliability to the level observed in the 5-deletion passages.

It appears that the rapidity with which the 5-deletion units appear (every fifth word) have the effect of forcing the student to attend closely to the task. This closer attention may be an important factor in the increased reliability of the scores on the 5-deletion passages.

Analysis of Variance Results

The test data were analyzed by use of a four factor analysis of variance with one factor being repeated measures. The three between measures analyzed were: (A) Fiction vs. Nonfiction, (B) Preview vs. No Preview, and (C) 5-Deletion vs. 10-Deletion. The within measure was (D) Testing I vs. Testing II. Table 3 presents the analysis of variance results.

From a perusal of Table 3 it can be seen that significance is indicated for the main effects of Passage Type (Fiction vs. Nonfiction), Presentation Procedure (Preview vs. No Preview), Deletion Pattern (5-Deletion vs. 10-Deletion), and Testing Procedure (Testing I vs. Testing II). Furthermore, significance is indicated for the interactions of Passage Type and Deletion Pattern as well as for

Table 3. Analysis of Variance Summary

Source	df	MS	F	P
Btwn/Gps	621	44.860		
A	1	3354.223	91.159	.000*
B	1	546.980	14.865	.000*
C	1	1061.927	28.860	.000*
AB	1	46.106	1.253	.262
AC	1	184.598	5.017	.024*
BC	1	3.760	.102	.748
ABC	1	67.740	1.841	.172
Error-Btwn	614	36.795		
W/IN Grp	621	5.641		
D	1	1826.660	688.513	.000*
AD	1	26.589	10.022	.002*
BD	1	6.990	2.635	.101
CD	1	.000	.000	.995
ABD	1	14.761	5.564	.018*
ACD	1	1.328	.500	.513
BCD	1	.024	.009	.921
ABCD	1	.329	.124	.725
Error-W/IN	613	2.653		

*Significant at the .05 level.

A = Fiction, Nonfiction
 B = Preview, No Preview
 C = 5-Deletion, 10-Deletion
 D = Testing I, Testing II

Passage Type and Testing Procedure. A significant triple interaction is also indicated for Passage Type, Presentation Procedure, and Testing Procedure. Figures 1, 2, and 3 present the three significant interactions.

Post Hoc Test and Discussion of Interactions

The question of interaction was raised by question 6 under The Problem. It will be dealt with at this time following the line of reasoning that unless interactions are ordinal, main effects should not be discussed.

Question 6: How do initial preview-final review procedures and types of context interact with particular deletion patterns on an aural cloze exercise?

The Tukey formula (Glass and Stanley, 1970) was employed as a post hoc test to investigate the reported interactions derived from the analysis of variance data. The simple effects of each variable for each interaction were tested and found to be significant ($P < .05$).

As can be seen from an examination of Figures 1, 2, and 3, all these significant interactions were ordinal. Therefore, the decision was made to treat the data through a study of the four main effects and to conclude that there were no unique interactions deserving further analysis.

Discussion of Main Effects

The test data provided means for each component of the four main effects. Table 4 presents those means. The

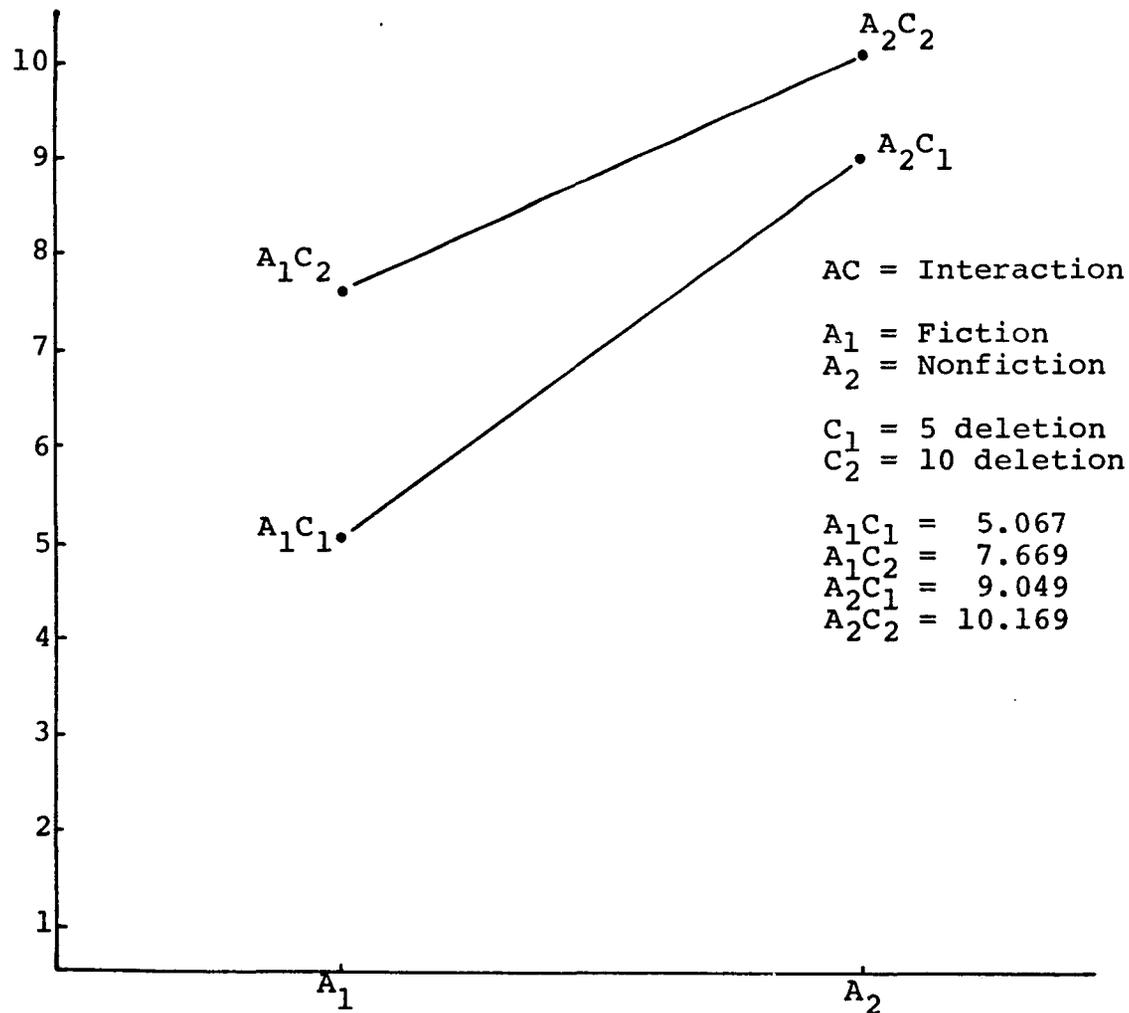


Figure 1. Interaction Between Passage Type and Deletion Pattern

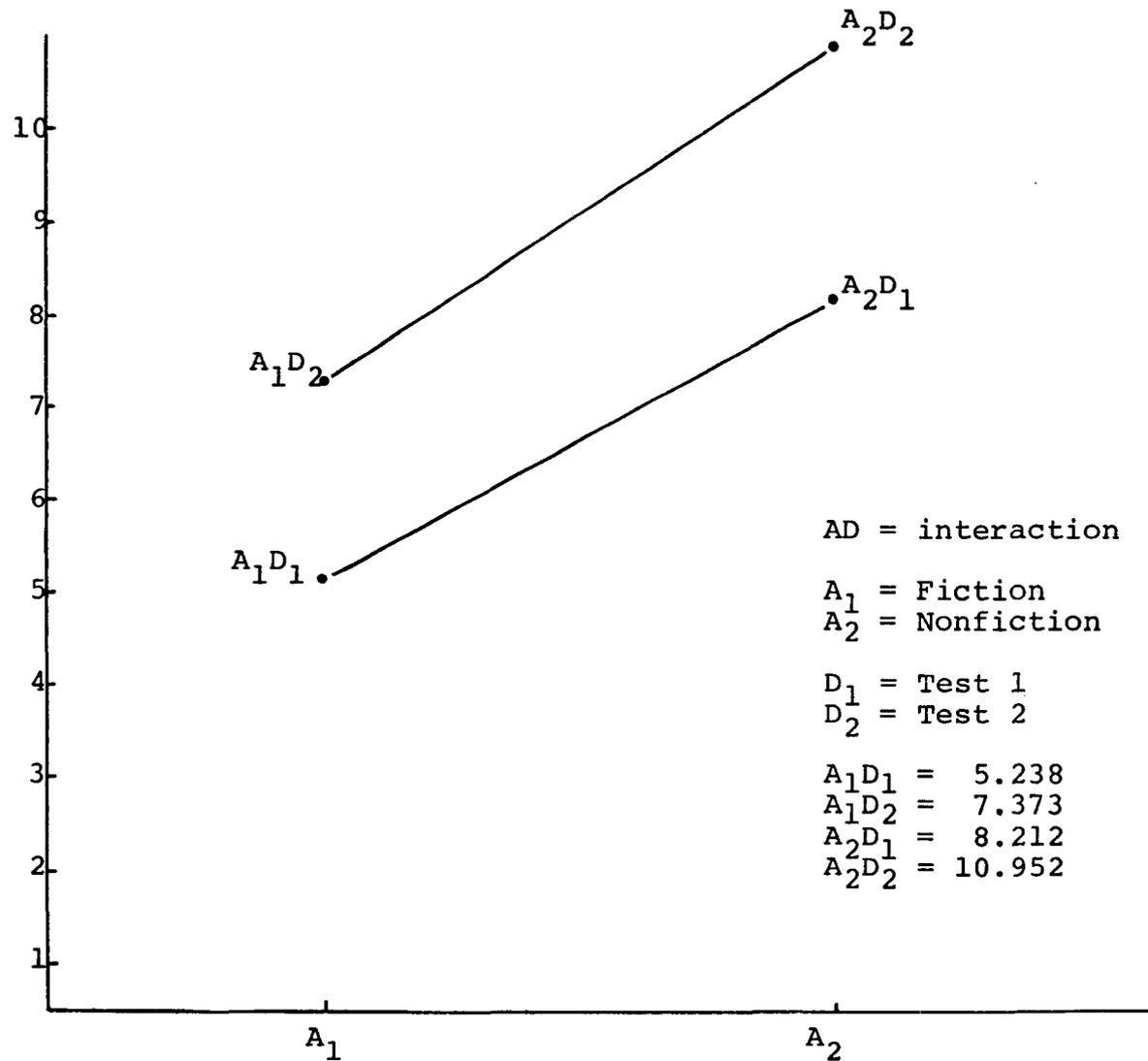


Figure 2. Interaction Between Passage Type and Testing Procedure

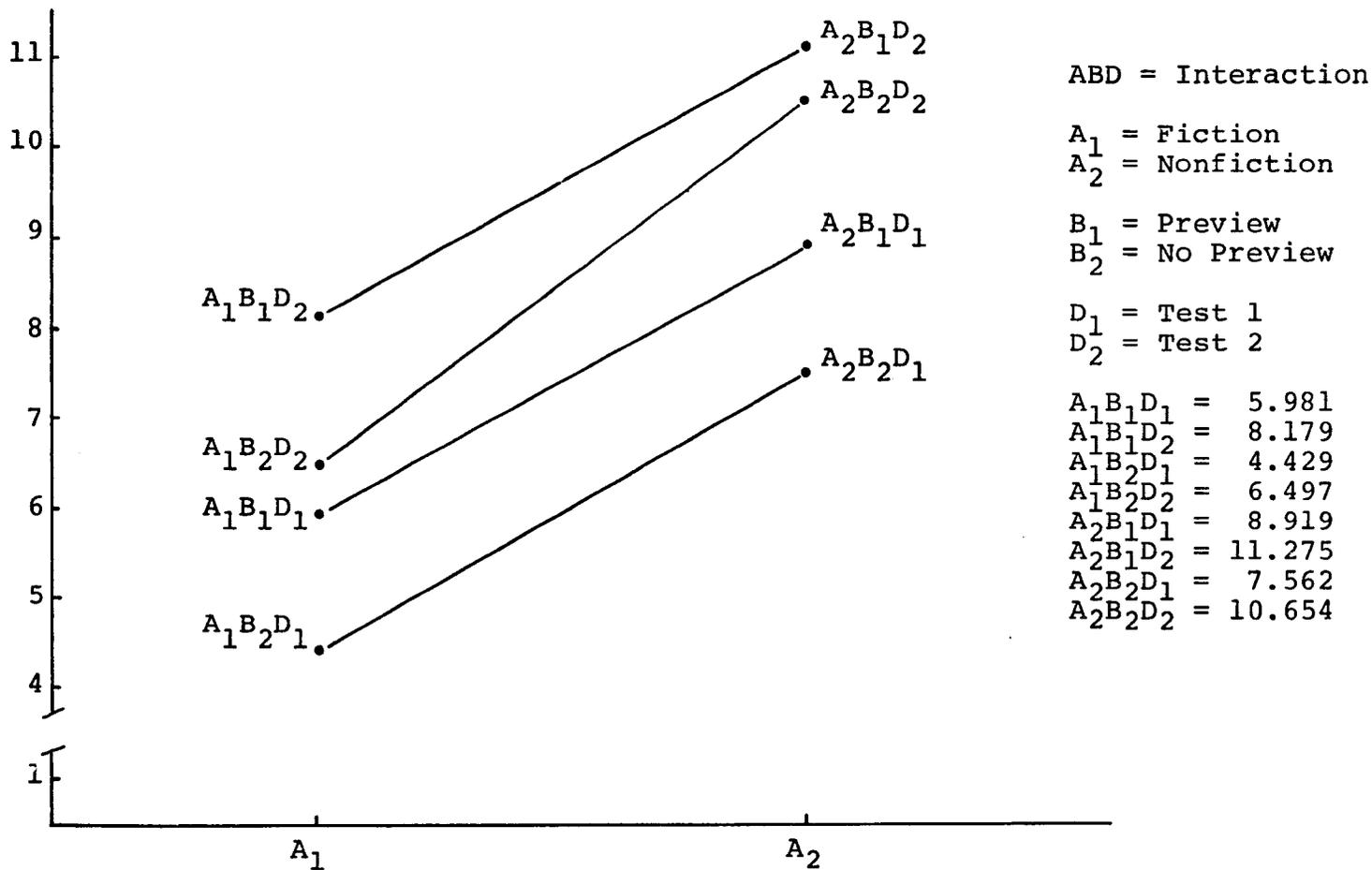


Figure 3. Interaction Among Passage Type, Presentation Procedure, and Testing Procedure

Table 4. Mean Raw Scores for Four Main Effects

Main Effect	Mean
Presentation Procedure	
Preview	8.526
No Preview	7.362
Testing Procedure	
Testing I	6.725
Testing II	9.162
Passage Type	
Fiction	6.305
Nonfiction	9.582
Deletion Pattern	
5-Deletion	7.058
10-Deletion	8.919

main effects are discussed in the same order as the questions which were raised under The Problem. Because question 1 has been answered, question 2 will be considered first.

Question 2: What effect does an initial preview presentation have on the aural cloze scores of seventh grade students?

The analysis of variance data indicated that presentation procedure is a significant factor in the aural cloze procedure. From an inspection of the means in Table 4 it is seen that the students obtained higher scores when allowed an initial preview presentation prior to testing.

An explanation for this higher score appears to be due to several factors. The most apparent explanation is that during the preview, the students had nothing to do but listen. In this situation each student could collect his thoughts and decide how he would fill each deletion. Also, during the preview there was no time lapse between sentences. This promoted greater continuity of sentence flow and allowed a more realistic listening situation.

Question 3: What effect does a repeated testing have on the aural cloze scores of seventh grade students?

The analysis of variance data indicated that repeated testing is also a significant factor in the aural cloze procedure. From an inspection of Table 4 it is noted that the second testing (Testing II) produced higher scores than the initial testing (Testing I).

An explanation for the higher scores seems to be due to the students having an opportunity to take the same test twice in quick succession. This would allow the students an opportunity to make corrections from Testing I that may have been due to the uniqueness of the task or the rapidity at which it was presented. Also, on Testing II each student could concentrate his efforts on those specific deletions he failed to complete on Testing I and could use Testing II as an opportunity to check his work.

Question 4: Is there a difference in the aural cloze scores obtained by students on a fiction and a nonfiction passage?

The analysis of variance data indicated that passage type is a significant factor in the aural cloze procedure. From an inspection of the difference between means in Table 4 it can be seen that the nonfiction mean score (9.582) is higher than the fiction mean score (6.305).

It would appear that an explanation for this difference lies in the nature of nonfiction material. Nonfiction material is usually written in a straightforward style which may allow greater predictability of words by the reader. Because fictional material makes greater use of figurative language and heavily employs elements of each author's style, the predictability of words is lessened. This unpredictability of words (these are the actual words used rather than grammatically correct words) is taken to its

logical extreme in poetry where style and unique combinations of words are heavily emphasized. It would seem, therefore, that the more predictable language style of non-fiction (barring content specific vocabulary) would enhance listening comprehension.

Question 5: What effects do different deletion patterns have on the aural cloze scores of seventh grade students?

The analysis of variance data indicated that deletion pattern is a significant factor in the aural cloze procedure. From an inspection of Table 4 it will be noted that the 10-deletion pattern produced higher scores than the 5-deletion pattern. These scores are higher in terms of percentage because the 5-deletion scores were doubled for comparative purposes.

The explanation for the higher scores on the 10-deletion passages would seem to be the increased amount of context between deletions. Whereas the 5-deletion pattern has four words between deletions, the 10-deletion pattern has nine words of context separating each deletion. This increased amount of context appears to heighten the students' chances of successfully completing each deletion.

Although the 10-deletion pattern produced higher scores, the 5-deletion passage tests were more reliable. As was discussed earlier, this difference in reliability was due to more than just the number of items sampled. The idea

discussed earlier of the increased need for attending to the task may be a partial explanation, but further research is indicated to arrive at a more precise explanation. However, it should be noted that both deletion patterns were quite difficult, producing a mean score of 8.919 of a possible 32 for the 10-deletion pattern and 7.058 of a possible 32 for the 5-deletion pattern.

An answer to the paradox posed by this rather unique situation as to which deletion pattern to use would lie in the nature of the task a researcher may be investigating. If he is interested in using aural cloze as a testing instrument, then it would seem wise to employ the 5-deletion pattern for its increased reliability to facilitate accuracy of measurement. However, if the researcher is interested in the utilization of the aural cloze procedure as a teaching technique, then the 10-deletion pattern would best serve the purpose by providing for more positive feedback to the students coupled with an easing of what appears to be a difficult task.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS FOR FURTHER RESEARCH

The summary, findings, conclusions, implications, and suggestions for further research are included in this chapter.

Summary of the Study

The assessment of listening comprehension has long been a concern of many researchers and educators. In the past, instruments that were developed to test material received aurally have been too long or cumbersome to be readily employable. Furthermore, the inadequacy of these methods of testing is clearly indicated by the inability of the examiner to control for question difficulty thus precluding an accurate assignment of levels of listening capability.

Researchers assessing reading comprehension have dealt with the problem of question difficulty through the cloze procedure. This has allowed for a more accurate stipulation of passage difficulty as well as ruling out a compounding of errors resulting from improper question selection.

Researchers dealing with listening comprehension have attempted to apply this same cloze technique to the assessment of listening comprehension. However, in doing so, there has been little effort to arrive at a standard testing technique as was accomplished in reading cloze. Each study which has employed aural cloze did so to achieve ends other than the development of a testing procedure. As such, there exists no well developed technique for utilizing cloze in a listening situation.

Because of this lack of research concerning itself specifically with the aural cloze technique, this investigator deemed it to be a worthwhile area of research. This study was devised to investigate the use of aural cloze as a testing procedure.

To this end, the researcher was interested in answering the following questions.

1. Are there differences in the reliability of aural cloze scores when differing deletion patterns are employed?
2. What effect does an initial preview presentation have on the aural cloze scores of seventh grade students?
3. What effect does a repeated teating have on the aural cloze scores of seventh grade students?

4. Is there a difference in the aural cloze scores obtained by students on a fiction and a nonfiction passage?
5. What effects do different deletion patterns have on the aural cloze scores of seventh grade students?
6. How do initial preview-final review procedures and type of context interact with particular deletion patterns on an aural cloze exercise?

Procedures

In this descriptive study the sample was drawn from the seventh grade population of Apollo Junior High School in Tucson, Arizona. The sample consisted of 311 students in 16 classes which comprised the total seventh grade language arts classes in that school. The students were assigned by intact classes to one of eight treatment groups. The classes were first ranked on the basis of enrollment and then the class with the highest and lowest enrollment were combined into one treatment group. The next highest and next lowest were combined into the second treatment group. This procedure was followed for all sixteen classes which yielded eight treatment groups.

The instruments for the collection of data consisted of four tape recorded passages and answer booklets. The first tape contained a nonfiction passage (Baseball) which had every fifth word deleted. This was designated as the

Preview Presentation. Following a complete presentation of this passage were two testing passages. These two passages were exactly alike. They were the same as the Preview Presentation except that they contained a five-second period of silence at the end of each sentence for each deletion contained in that sentence. These two passages, designated as Testing I and Testing II, were used for testing the students' ability to fill in the words that had been deleted.

The second tape contained a fiction passage (Road) which had every fifth word deleted. The format for the tape was the same as described above.

The third tape contained the same nonfiction passage as the first tape (Baseball) but with every tenth word deleted. The format for the tape was the same as described above.

The fourth tape contained the same fiction passage (Road) as the second tape with every tenth word deleted. The format for this tape was the same as described above.

As can be seen, each tape was organized in a format of Preview Presentation, Testing I, Testing II. Through a manipulation of these tapes the examiners were able to obtain all combinations of preview, testing, and deletion patterns needed for the present study.

The students were randomly assigned to treatment groups. Each group was exposed to both the nonfiction and

the fiction passage employing the same deletion pattern. The tapes were manipulated so that each group would receive one tape on a Preview-Testing I-Testing II order and the other tape in a Testing I-Testing II presentation. The presentations were arranged so that each of the eight groups received the tapes and procedures in a different order.

All tests were hand scored by the investigator. An answer was scored as correct only if it was an exact replacement for the word deleted from the passage. One point was allowed for each correct answer. This yielded two scores on each passage or four scores for each student.

The data were analyzed by use of a four factor analysis of variance with one factor being repeated measures. The Tukey (Glass and Stanley, 1970) post hoc test was employed to investigate the significance of the reported differences from the above measure. Internal consistency was computed for all tests through use of Mosier's formula (Lindquist, 1951, p. 581) for estimating reliability from half-length tests. To further check the reliability coefficients for significant differences, Feldt's (1969) formula was used.

Findings of the Study

Findings Relative to Question One

There was a difference in the reliability of aural cloze scores when two different deletion patterns were employed. The five deletion pattern was significantly more reliable than the ten deletion pattern.

Findings Relative to Question Two

Presentation procedure was a significant factor in the aural cloze procedure. The Preview Presentation produced significantly higher scores than the presentation without a preview.

Findings Relative to Question Three

Repeated testing was a significant factor in the aural cloze procedure. A second testing (Testing II) produced significantly higher scores than the initial testing (Testing I).

Findings Relative to Question Four

Passage type was a significant factor in the aural cloze procedure. The nonfiction passage produced significantly higher scores than the fiction passage.

Findings Relative to Question Five

Deletion pattern was a significant factor in the aural cloze procedure. The ten-deletion pattern produced higher scores than the five-deletion pattern.

Findings Relative to Question Six

Significant interactions were found to exist between passage type and deletion pattern; passage type and testing procedure; and passage type, presentation procedure, and testing procedure. Further analysis of these interactions indicated that they were all ordinal in nature and thus were not unique interactions.

Conclusions and Implications of the Study

The following conclusions and implications are limited to populations and conditions similar to the ones studied.

Conclusions

1. A given deletion pattern employed in an aural cloze exercise may yield an instrument substantially different in reliability and difficulty than another deletion pattern.
2. Differing methods of presentation of the aural cloze procedure may yield instruments quite different in terms of difficulty.

3. Different types of material employed in the aural cloze procedure may yield instruments that differ in difficulty more than readability formulas would indicate.

Implications

The conclusions arrived at in this study suggested the following implications:

1. The decision as to which particular deletion pattern should be used must be based upon the purposes for the aural cloze exercise. Referring to the data from this study, if the aural cloze were to be employed as a testing technique, a five-deletion pattern would preferably be chosen due to its higher reliability than the ten-deletion pattern.

If the aural cloze procedure were to be used in a teaching situation, the ten-deletion pattern might be preferred since it would provide more positive feedback to the students through yielding higher scores.

2. The need for more exposure to the material presented in aural cloze is perhaps indicated. In reading cloze the student has the opportunity to refer back and ahead in the context to complete the deletions. In a listening situation this opportunity does not exist. Therefore, a provision for this must be made

by providing repeated chances to hear the material through the use of a preview of the material prior to testing and a repeated testing.

3. When selecting material for constructing a cloze test, type of content needs to be taken into consideration. The data from this study indicate that type of material affects the difficulty of the cloze passages. This may indicate that in employing aural cloze in a teaching situation it may be wise to begin with nonfiction material to promote better responses while introducing this new procedure.

Suggestions for Further Research

During the analysis of the data of this study several questions arose for which there are as yet no answers. Therefore, the suggestions for further research are as follows:

1. This study should be replicated using children of different ages and grade levels.
2. This study should be replicated using other seventh grade populations in different socioeconomic and geographic areas.
3. This study should be replicated with the intent of specifically looking at different deletion patterns. Through this study a closer look could be taken at

why the ten deletion pattern produced higher scores but was less reliable.

4. This study should be replicated to specifically investigate the difference in difficulty of fiction vs. nonfiction passages.
5. This study should be replicated in differing situations to investigate whether there is an optimal combination for teaching or testing.
6. This study should be replicated with passages of differing levels of difficulty in order to investigate the relationship between students' grade level and listening passage levels.
7. A comparative study should be attempted to investigate the relationship of students' performances in aural cloze to standardized measures of listening ability.
8. An experimental study should be attempted to see if teaching through the use of aural cloze will improve listening comprehension.

APPENDIX A

FICTION PASSAGE

Go Up The Road¹

"But not to California," said Mama quickly. "I will never again set foot in California."

Yolanda looked at her mother sympathetically. On other matters, Mama did not speak up to Papa this way, but in this one thing she was very firm. Last year, when they had been working in the grapes, Baby Carlos had sickened and died. They said it was the spray used to rid the vines of bad insects. The spray had been hard on all of them. Their skin itched, their eyes watered, and they coughed as though they would never stop, but on babies it was hardest of all. Finally the angels took Carlos so he would not suffer any more.

In years past the angels had taken two other children from the family, but then there had been no known cause, and Mama accepted it. It was just something that happened. But Carlos' death was because of the spray, and Mama swore she would never go back to that place again.

"No." Papa frowned because good wives did not speak so to their husbands. "We do not go to California."

1. Lampman (1972, pp. 1-2).

APPENDIX B

NONFICTION PASSAGE

"Baseball"¹

Suppose a baseball is thrown at you and you want to catch it. What do you have to do? You must put your hand in the path of the baseball. The baseball will hit your hand and stop moving. As it stops, you must grab the baseball to keep it from falling down or bouncing back.

Would it stop if your hand weren't in the way?
Would it go right past you?

The baseball won't stop by itself just any place you want it to. Your hand has to force it to stop. Your hand makes the baseball change its speed. The baseball was moving before your hand got in its way. By catching it, you made the baseball stop moving. You forced a change in its speed.

You can also force a baseball to change its speed by throwing it. It won't lift off the floor and sail through the air by itself, but you can make it do so. By throwing the baseball, you can change it from having no motion to having a speedy motion.

1. Gallant and Asimov (1973, pp. 2-3, with revision noted).

APPENDIX C

CLOZE PASSAGES

Go Up The Road¹

5-Deletion Passage

"But not to California," said Mama quickly. "I will never again set foot in California."

Yolanda looked at her _____ sympathetically. On other matters, _____ did not speak up _____ Papa this way, but _____ this one thing she _____ very firm. Last year, _____ they had been working _____ the grapes, Baby Carlos _____ sickened and died. They _____ it was the spray _____ to rid the vines _____ bad insects. The spray _____ been hard on all _____ them. Their skin itched, _____ eyes watered, and they _____ as though they would _____ stop, but on babies _____ was hardest of all. _____ the angels took Carlos _____ he would not suffer _____ more.

In years past _____ angels had taken two _____ children from the family, _____ then there had been _____ known cause, and Mama _____ it. It was just _____ that happened. But Carlos' _____ was because of the _____, and Mama swore she _____ never go back to _____ place again.

"No." Papa _____ because good wives did _____ speak so to their husbands: "We do not go to California."

1. Lampman (1972).

Go Up The Road¹

10-Deletion Passage

"But not to California," said Mama quickly. "I will never again set foot in California."

Yolanda looked at her mother sympathetically. On other matters, _____ did not speak up to Papa this way, but _____ this one thing she was very firm. Last year, _____ they had been working in the grapes, Baby Carlos _____ sickened and died. They said it was the spray _____ to rid the vines of bad insects. The spray _____ been hard on all of them. Their skin itched, _____ eyes watered, and they coughed as though they would _____ stop, but on babies it was hardest of all. _____ the angels took Carlos so he would not suffer _____ more.

In years past the angels had taken two _____ children from the family, but then there had been _____ known cause, and Mama accepted it. It was just _____ that happened. But Carlos' death was because of the _____, and Mama swore she would never go back to _____ place again.

"No." Papa frowned because good wives did _____ speak so to their husbands. "We do not go to California."

1. Lampman (1972).

"Baseball"¹

5-Deletion Passage

Suppose a baseball is thrown at you and you want to catch it. What do you have _____ do? You must put _____ hand in the path _____ the baseball. The baseball _____ hit your hand and _____ moving. As it stops, _____ must grab the baseball _____ keep it from falling _____ or bouncing back.

Would _____ stop if your hand _____ in the way? Would _____ go right past you?

_____ baseball won't stop by _____ just any place you _____ it to. Your hand _____ to force it to _____. Your hand makes the _____ change its speed. The _____ was moving before your _____ got in its way. _____ catching it, you made _____ baseball stop moving. You _____ a change in its _____.

You can also force _____ baseball to change its _____ by throwing it. It _____ lift off the floor _____ sail through the air _____ itself, but you can _____ it do so. By _____ the baseball, you can _____ it from having no _____ to having a speedy motion.

1. Gallant and Asimov (1973).

"Baseball"¹

10-Deletion Passage

Suppose a baseball is thrown at you and you want to catch it. What do you have to do? You must put _____ hand in the path of the baseball. The baseball _____ hit your hand and stop moving. As it stops, _____ must grab the baseball to keep it from falling _____ or bouncing back.

Would it stop if your hand _____ in the way?
Would it go right past you?

_____ baseball won't stop by itself just any place you _____ it to. Your hand has to force it to _____. Your hand makes the baseball change its speed. The _____ was moving before your hand got in its way. _____ catching it, you made the baseball stop moving. You _____ a change in its speed.

You can also force _____ baseball to change its speed by throwing it. It _____ lift off the floor and sail through the air _____ itself, but you can make it do so. By _____ the baseball, you can change it from having no _____ to having a speedy motion.

1. Gallant and Asimov (1973).

APPENDIX D

TEST BOOKLET FRONT SHEET

Group: _____

Presentation #1

Tape: _____

Procedure: P T T

Deletion: _____

Correct: #1: _____ #2: _____

Presentation #2

Tape: _____

Procedure: P T T

Deletion: _____

Correct: #1: _____ #2: _____

Name: _____

Age: _____

Teacher's name: _____

Period: _____

Remarks:

APPENDIX E

TEST BOOKLET ANSWER SHEET¹

I

II

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

Correct: _____

Correct: _____

1. Used with 10-deletion passage.

APPENDIX F

EXAMINER'S TESTING FORMAT SHEET

Procedure Sheet: No preview-test-test
Preview-test-test

- I. INTRODUCE SELF
 - A. Tell what is being done--
 1. Studying how people listen, etc.
 2. Reassure that it has nothing to do with school, class, or grades.
- II. Pass out answer sheets and pens--
- III. Fill out front sheet--same as provided copy--
- IV. Turn to PAGE 1
- V. Introduce No Preview Tape--Set up tape first--

"I have here some stories. In each story the author has left out some of the words. I would like your help in replacing the missing words. I have recorded the story on tape and will play it for you. Each time there is a word left out, a buzzer will sound and a voice will tell you the number of the word that was left out. This will help you keep track of the word when you write it down in your answer booklet. There will be a short pause at the end of each sentence to give you time to write down the words you think the author would have used. Be sure to write the word in the correct blank under Column one (demonstrate) on your answer sheet so that word one that is left out of the story will go on line one, and so on. Write the word as best you

can. You will not be penalized for misspellings as long as I can tell what word you mean. A good way to do the sentences is to listen to the entire sentence first, and then write the words for the blanks. For this time I want everyone to write their answers with the red (demonstrate) pen."

Are there any questions?

VI. PLAY TAPE--ONLY TESTING PORTION

VII. "Now that you have had a chance to write your answers, I will play the tape through one more time to give you a chance to make any corrections. If you wish to change your first answer or if you did not answer a word on the last time, write the new answer next to the correct number under Column two (demonstrate). This time I want everyone to use the black pen."

Are there any questions?

VIII. PLAY TAPE--ONLY TESTING PORTION

IX. Turn to page 2 (demonstrate)

X. Change tape

XI. "Now that you are all familiar with this technique, I would like your help in filling out one more passage in which some words have been left out. This time I am going to play the entire passage through for you first. Nobody is to write anything this time. I want you to just sit and listen and think what word the author might have used for each word left out."

XII. PLAY TAPE--PREVIEW PORTION--

XIII. "Now that you have heard the passage once, I am going to play it for you again. This time use the red pen to write your answer by the correct number under Column one (demonstrate)."

Are there any questions?

XIV. PLAY TAPE--TESTING PORTION***

XV. "Now I am going to play the tape a third time to give you a chance to change or fill in any answer blanks. This time use the black pen and write your answers under Column two (demonstrate). Only write answers this time if you wish to change an answer or if it is the first time you are answering this number."

Are there any questions?

XVI. PLAY TAPE--TESTING PORTION***

XVII. Wrap up--

1. Collect answer sheets
2. Collect pens--at same time
3. Rewind tape and return to proper box
4. Note any irregularities on schedule sheet.

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