

AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS AND
EFFICIENCY OF USING PROGRAMMED MATERIAL
TO REVIEW PUNCTUATION IN
TRANSCRIPTION CLASSES

by

RUTH CHARLOTTE MOYER

Bachelor of Science
University of Nebraska
Lincoln, Nebraska
1945

Master of Education
University of Nebraska
Lincoln, Nebraska
1958

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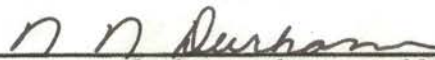
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Thesis Adviser









Dean of the Graduate College

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PREFACE

Although research has shown that violation of punctuation rules is one of the primary causes of unmailable transcripts, only a few experimental studies have been conducted to determine an effective means of reviewing punctuation and thereby decreasing or eliminating punctuation errors. The problem of this study is to determine the effectiveness and efficiency of using programmed material to review punctuation in transcription classes.

I am grateful to Dr. Robert A. Lowry, who served as my advisor and Chairman of my Advisory Committee, for his constant encouragement and guidance.

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CHAPTER I

INTRODUCTION

In recent years the curricula of schools at all levels have been scrutinized to determine the value of the content, the use of instructional time, and the methods of instruction. Dubious looks have been cast at the skills area of the business curriculum, particularly at the time involved in teaching the skills in relation to the results achieved. The skill involved in transcribing shorthand notes into mailable letters, reports, and other records has been the subject of much discussion by professional groups and research by graduate students.

The skill of transcription involves not only translating the shorthand characters into words forming the context of sentences but also the application of certain rules regarding related learnings; namely, spelling, punctuation, grammatical construction, word usage, and the like. As a result of her research, Frink states:

In general, it may be said that business educators, stenographic teachers, stenographic graduates, and stenographic employers believe that greater emphasis should be placed on the related learnings in the stenographic courses and that error analyses of both student transcripts and business letters tend to substantiate this belief.¹

¹Inez Frink, "Implications of Research in Shorthand and Transcription," National Business Education Quarterly, XXIX (March, 1961), p. 17.

All of the related learnings are taught in grade school, expanded in junior high school, and reviewed in high school. They are further refined in the first quarter of English composition in college; yet they must be reviewed again in college transcription classes. The time required to review the related learnings during transcription classes is, in effect, subtracted from time needed for practice in the actual transcription process. Mailability of transcripts is affected by the failure of the students to apply the previously learned and recently reviewed rules governing the related learnings. This fact suggests that reinforcement of the related learnings may not have been strong enough to assure transfer of these learnings to the transcription process.

Statement of the Problem

The problem of this investigation is to test the following hypotheses regarding one of the areas of related learnings--punctuation:

(1) Review of punctuation by means of programmed instruction will be significantly more effective than the conventional methods of review used during the transcription course. (2) Review of punctuation by means of programmed instruction will be significantly more efficient than the conventional methods of review used during the transcription course.

The research design was set up to answer the following questions:

1. Were the four classes involved in the experiment comparable with respect to mental ability, verbal ability, and knowledge of the subject matter?
2. Did classes using the programmed material do significantly better on punctuating printed matter than the control classes?

3. Did classes using the programmed material do significantly better on transferring their knowledge of punctuation to transcription from shorthand notes than the control classes?
4. In the control classes, did one instructor produce results significantly better than the other?
5. In the classes using the programmed materials, did one instructor produce results significantly better than the other?
6. Did the programmed classes for each instructor do significantly better than his control classes?
7. Were each instructor's programmed classes significantly more efficient than his control classes?

Scope

This experiment involved 74 students in four advanced shorthand classes of varying size taught by two instructors at Colorado State University, Fort Collins, Colorado. The control groups were in operation during the winter quarter, 1966, and the experimental groups during the spring quarter, 1966.

Limitations

Several limiting factors are apparent in this study; and as a result, certain restrictions must be placed on the interpretation of findings and on the conclusions of the study.

The number of students involved in the study is limited; however, the study includes four-fifths of the total number of students who were enrolled in the specific advanced shorthand course during the year.

Random selection was not used in this experiment; the sample includes all students who registered for the course. Although each student selected the section that he attended, his choice of sections

was restricted by conflicts with other required courses. Gage recognizes this situation as a "nonequivalent control group design," because

. . . both the control group and the experimental group do not have pre-experimental sampling equivalence; instead they are naturally assembled collectives, as similar as availability permits but not yet so similar that one can dispense with the pretest.²

The experiment was limited to determining the relative effectiveness and efficiency of reviewing punctuation by use of programmed material. Therefore, in the mailable copy pretest and posttest, only punctuation marks were checkpoints.

To assure that the same material would be presented to both groups, the instructors of the control groups were provided with the same sample sentences that were included in the programmed material used by the experimental groups. However, differences in instructor performance may have to some extent affected the results of the experiment.

Significance of the Study

Frink reported that errors in the related learnings comprise approximately 40 per cent of the total errors found on student transcripts. She also noted that 82 per cent of 1,765 business letters mailed by firms in 42 states contained one or more errors, 47 per cent of which were English errors and 53 per cent punctuation errors.³

²Nathaniel L. Gage, ed., Handbook of Research on Teaching (Chicago, 1963), p. 217.

³Frink, p. 17.

As incorrect punctuation causes so many school transcripts and business letters to be unmailable, a great deal of time and money would be saved if a more effective means could be found to review punctuation in transcription classes.

Programmed instruction, which implies immediate reinforcement of the correct answer, has been used by business, the military services, and school systems to teach facts and concepts. As punctuation has been taught and retaught previously, it can be reviewed by the use of this new medium--programmed instruction.

After a survey of the literature, the investigator concluded that this is the first study attempting to utilize programmed instruction to review a related learning area involved in the transcription process.

If the study provides evidence that the use of programmed material can promote a more effective review than conventional methods, it may be assumed that as a result of the use of programmed material more student transcripts and more business letters would be mailable.

If the experiment indicates that programmed review is just as effective as conventional review but is more efficient, the time saved could be devoted to additional practice in transcription.

If the evidence reveals that programmed material is both effective and efficient for reviewing punctuation, this kind of material could also be used in business communications and report writing classes, in which the teaching of such basic knowledge is essential but time-consuming.

Definition of Terms

The following definitions are provided to clarify the content of this study:

Transcription refers to translation of shorthand notes into verbatim context, with due attention to the three complementary elements: typewriting, proofreading, and related learnings.

Related learnings encompass grammar, word usage, punctuation, and spelling.

Mailable copy refers to the result of the transcription process and infers verbatim context and correct application of related learnings and typewriting procedure to produce an acceptable end product, the mailable letter.

Programmed material alludes to published or duplicated material developed in small sequential steps or items, called frames, and presented by means of a book, tapes, strips of paper, slides, or auditory material used with a tape recorder.⁴

The program refers to the instructional material--its organization, development, and sequencing.⁵

A response is the student's answer to each unit of information presented in the program.⁶

⁴Edward Green, The Learning Process and Programmed Instruction (New York, 1962), p. 117.

⁵William H. Melching, et al., Automated Instruction (Ft. Bliss, 1963), p. 10.

⁶Edward B. Fry, Teaching Machines and Programmed Instruction (New York, 1963), p. 146.

Reinforcement occurs when the student sees the answer immediately after he responds to a frame.

Linear Programming is a method of presenting subject matter in small sequential steps by which the student proceeds from the easy to the complex with a very low error rate and is positively reinforced at each stage.

Effectiveness, as herein used, reflects statistically the students' retention and correct application of the punctuation rules to printed matter during the transcription process.

Efficiency, as used herein, refers to the time required to review punctuation in the transcription classes involved in the study.

This chapter has been devoted to stating the problem; explaining the scope, limitations, and significance of the investigation; and defining certain terms. Chapter II contains a review of literature and research relating to transcription errors, particularly errors in punctuation, and the nature, background, and earlier experimental applications of programmed instruction. In Chapter III, the method of data analysis and the procedures of the study are presented in detail. The results of the statistical procedures applied in determining the relative effectiveness and efficiency of programmed instruction in reviewing punctuation in transcription classes are given in Chapter IV. Finally, in Chapter V, implications and recommendations are presented.

CHAPTER II

REVIEW OF RELATED LITERATURE

The related literature will be reviewed in two sections. The first section pertains to (1) analyses of transcription errors involving related learnings and (2) various remedies that have been used in efforts to eliminate such errors, particularly errors in punctuation. In the second section the background of programmed instruction is discussed, and experiments related to the criteria of effectiveness and efficiency of this method are reviewed.

Transcription Errors

Business Education instructors have long accepted the fact that incorrect or omitted shorthand outlines cause transcripts to be unmailable. These instructors have worked vigorously to improve the command of theory and the dictation rates of their students. Even perfect and complete notes, however, are not necessarily transcribed into mailable letters, as analyses of transcription errors have proved.

Analyses of Transcription Errors

In analyzing transcripts, errors may be neatly divided into two categories: errors occurring during dictation and errors occurring during transcription. Errors that occur during the transcription phase

are in transcribing, proofreading, or related learnings. Frink states:

There seems to be general agreement among teachers of shorthand and transcription and business educators that much more emphasis should be given the related learnings of transcription; namely, spelling, punctuation, grammatical construction, word usage, and the like.¹

There seems to be unqualified agreement that the related learnings must be considered an important phase of the stenographic program and, unless students already possess a high degree of skill in their application, they must be taught.²

The related learnings consist primarily of the fundamentals of English. Leslie recognized this fact and advised transcription teachers to consider these fundamentals in teaching transcription:

The first requisite for the improvement of the teaching of transcription is a clear recognition that the principal problem in transcription is English, and more especially the conventions of written English.³

. . . our best efforts to build transcription speed on mailable copy will be frustrated by that lack of skill in the application of the conventions of written English.⁴

Of the various errors in related learnings, punctuation deserves the most emphasis, according to the results of previous research.

After analyzing and classifying 298 research studies in shorthand and transcription completed in the United States prior to January, 1946, Anderson commented:

An analysis has been made of the errors found in pupils' transcripts in 27 different studies. In the majority of these

¹Frink, p. 16.

²Ibid.

³Louis A. Leslie, Methods of Teaching Transcription (New York, 1949), p. 162.

⁴Ibid.

studies there has been general agreement in the findings of the various investigators that the frequency of errors in transcription occurs in the following order: errors in punctuation, typing, grammar, spelling, capitalization, substitution of words, omission of words, arrangement of letters and mechanical details, and syllabication. The investigators of these various studies have generally agreed that the basic cause of errors in transcription was the inability of the pupils to apply punctuation, capitalization, spelling, and English usage to a practical situation in transcribing.⁵

The findings reported by these investigators cannot be ignored. . . . So long as the application of these basic English principles continues to be the major stumbling block in the production of mailable transcripts, shorthand teachers must plan to devote some class time and attention to such fundamentals as punctuation, capitalization, and spelling. The development of a high degree of shorthand skill is not enough.⁶

In reviewing Jensen's study, which she considered a superior analysis of transcription errors, Anderson noted that 33 per cent of all errors committed by students on their transcripts were English errors, slightly more than 58 per cent of which were punctuation errors.⁷

Wilkes, in her analysis of shorthand and transcription methods and materials since 1946, disclosed that more emphasis should be given to teaching the related learnings, particularly punctuation usage, in the shorthand classroom.⁸

In the period between the Anderson study and the Wilkes study, a committee composed of selected UBEA, NABTTI, and DPE members analyzed

⁵Ruth Irene Anderson, "The Errors They Make in Transcription," Business Education World, XXIX, June, 1949, p. 609.

⁶Ibid.

⁷Ibid., p. 608.

⁸Mary Nell Wilkes, "An Annotated Bibliography of Selected Researches Dealing with Methods of Teaching and Materials for Instruction in Shorthand and Transcription, January 1, 1946--December 31, 1957," National Business Education Quarterly, Fall, 1962, p. 70.

research in business education and presented a series of nontechnical articles indicating implications of the latest research. The purpose of these articles was to inform teachers of new ideas and suggestions that they could apply to the classroom situation. In the area of shorthand and transcription, Anderson's study was selected for review. One may assume that the committee members sensed a need at that time for information regarding transcription errors.⁹

The aforementioned references emphasized the importance of related learnings to the transcription process and indicated the area of related learnings most frequently causing unmailable transcripts--punctuation. The next step is to determine what remedies have been developed to combat the punctuation problem.

Remedies for Punctuation Errors

It is likely that more procedures for remedying punctuation errors in transcription have been tried than have ever been recommended in published literature. As far as this investigator could determine, very little formal research has been devoted to developing procedures for decreasing or eliminating transcription errors. Stather confirms this conclusion with the following comment:

Many of the transcription error studies which have been undertaken in the past fifteen years have unfortunately been but isolated analyses of student transcripts. They have pointed up kinds of errors made, but have failed either to recommend teaching procedures required to overcome student weaknesses

⁹Sub-committee of the Joint Committee on Coordination and Integration of Research in Business Education, "What We Know about Shorthand and Transcription--from Research," Business Education Forum, VIII, January, 1954, pp. 23-25.

or to delimit the instructional objectives in terms of the current requirements of business.¹⁰

Despite the fact that punctuation, like the other related learnings, has been taught to students from the time they were in grade school, many students are not able to apply the rules during the transcription process in college shorthand classes. Therefore, a comprehensive review and systematic application of punctuation rules is essential so that the students can produce mailable transcripts.

The remainder of this section deals with procedures for reviewing punctuation and thereby helping to eliminate punctuation errors on transcripts.

Changing the Type of Copy

Krause suggested emphasizing common usages of punctuation marks by using copy that lacks punctuation, then copy that has been edited, and finally copy containing uncorrected errors.¹¹

The purpose of this procedure is to help the students progress from simple recall of the punctuation rules to the more complex function of recognizing the applicable mark, based on a knowledge of the punctuation rules.

Correlating Drills and Marginal Reminders

To reinforce the students' learning of punctuation rules, Robb suggested drills to correlate with the marginal reminders in the Gregg

¹⁰Donald Gilmour Stather, "The Application of Rules of Punctuation in Typical Business Correspondence" (unpub. Ed. D. dissertation, Boston University, 1960), p. 29.

¹¹Ruthetta Krause, "Ways to Make English Rules Stick," Business Teacher, April, 1959, p. 26.

Shorthand Simplified textbooks.¹² For example, if the marginal reminder consisted of a semicolon and the reason for its use, Robb would provide several sentences of like construction to drill the students in this specific usage.

Constructing a Textbook-Workbook

Cleary made a comparative analysis of 16 studies to determine the relative frequency of types of transcription errors.¹³ On the basis of his analysis, he developed a textbook-workbook, including in it numerous exercises designed to decrease or eliminate high-frequency transcription errors.

Relating Punctuation Rules and Proofreading

To facilitate the review and retention of punctuation rules, the present writer keyed by number the punctuation marks on master transcripts. Each number corresponded to the number of the applicable rule given on a punctuation rule sheet. When the student proofread his transcripts against the master transcripts, he noted the number in the margin beside the sentence in which he made a punctuation error. Then he referred to the punctuation rule sheet to review the rule which corresponded with that number.

¹²Clara June Robb, "Pretranscription Drills on English Fundamentals," Business Education Forum, October, 1959, pp. 13-14.

¹³Joseph B. Cleary, "The Development and Construction of a Textbook-Workbook in Transcription English Style and Procedures," National Business Education Quarterly, XXXII, Fall, 1963, pp. 9-10.

Emphasizing Selected Rules

Stather made a study to determine which rules of punctuation business transcribers use most frequently. On the basis of 99 selected punctuation rules, he analyzed over 120,000 running words of business correspondence in 17 firms and recorded all possible applications of punctuation rules according to frequency of occurrence.¹⁴ He concluded that approximately one half of the commonly recognized rules of punctuation are used in modern business correspondence, and of this group about one fourth are in frequent use.¹⁵

After administering a two-battery punctuation test composed of 12 business letters, he rejected certain items because they pertained to rules commonly used in letter writing and had such a low degree of difficulty that they would not discriminate between students in the upper and lower groups.¹⁶

The criterion test, involving 29 rules, was then administered to 400 senior stenographic students in 14 selected high schools to determine their relative performance on the written and oral forms. In the written form the students inserted punctuation in the typewritten letters which were distributed to them. In the oral form they took these letters in dictation, transcribed them, and inserted the punctuation during the transcription process.¹⁷

¹⁴Stather, p. 43.

¹⁵Ibid., p. 113.

¹⁶Ibid., p. 93.

¹⁷Ibid., p. 95.

Stather found that students did not have as much success in punctuating when transcribing from shorthand notes as they had when they were punctuating typewritten material presented for correction.¹⁸

Using a Programmed Punctuation Textbook

Several programmed English textbooks have been published for all levels and for either instructional or review purposes. One programmed book on comma usage has been written by West;¹⁹ however, this researcher found no evidence to indicate that West's book has been used to review punctuation in transcription classes.

The next section delves into the background of programmed instruction and discusses experiments in the methods and uses of this new medium.

Programmed Instruction

Background of Programmed Instruction

Despite the many terms applied to this new method of instruction--programmed instruction, automated teaching, auto-instructional method, and programmed learning--all have the same meaning, as indicated by Melching, who describes programmed instruction in this manner:

. . . a special instructional procedure in which a course of materials is logically organized so that the material may be presented to the student in small steps and in an ordered sequence to permit both optimal learning and control of the sequences of learning.²⁰

¹⁸Ibid., p. 113.

¹⁹L. P. West, 300 Commas (New York, 1964).

²⁰William H. Melching, A Procedural Guide to the Programming of Instruction (Ft. Bliss, 1962), pp. 3-4.

The characteristics of programmed instruction, as listed by Huffman, are (1) breaking the subject matter down into small units, (2) requiring the student to make a response in every step, (3) reinforcing his response, and (4) having the student work at his own pace.²¹

Relationship of Programmed Instruction to Educational Goals

Authorities have proved that programmed instruction can do what even the best classroom instructor cannot do for all students all the time: secure the learner's attention; make the most important cues prominent; obtain continual, active, responses; and provide immediate knowledge of the results.²²

Like all methods of instruction, new and old alike, programmed instruction has advantages and disadvantages. Moreover, like all methods, it must be used appropriately and with good judgment. With judicious use in certain circumstances, it has accomplished the following purposes:

1. Raised the student end-of-course proficiency.
2. Provided instructors with an effective means of dealing with the problem of individual differences.
3. Improved the attitude of students toward learning certain subject matter.
4. Freed the instructor of routine duties and time-consuming commitments.
5. Reduced the time required to train a student to a satisfactory level of performance.²³

²¹Harry Huffman, "Programmed Instruction in Business Education," National Business Education Yearbook (Washington, 1964), p. 78.

²²Lawrence M. Stolurow and Leonard J. West, "Teaching Machines and Self-Instructional Programming," Delta Pi Epsilon Journal, III, April, 1961, p. 2.

²³William Melching, et al., Automated Instruction (Ft. Bliss, 1963), p. 5.

A method of instruction designed to accomplish such obviously worthwhile educational goals must have a basis in sound psychological theories.

History of Programmed Instruction

Though programmed instruction itself is relatively new, one of its basic theories, asking leading questions in a one-to-one student-teacher relationship, dates back to Socrates. He is said to have led an ignorant slave boy to the correct answer to a mathematical problem by use of a series of questions. The questions were designed to lead the boy step by step to the correct solution of this one particular problem. Through prompts and cues in his questions, Socrates disclosed a part of the answer to his student. The student's newly acquired knowledge came not from teaching but from questions constructed by a teacher in a one-to-one relationship between himself and a student.²⁴

Centuries later, Thorndike, an experimental psychologist, developed the law of effect. According to this law, the reinforcement of stimulus-response connections depends on the effects that follow the response. Thorndike found that if the stimulus was followed by a response and then by a "satisfier" (such as a reward to an animal or a correct answer to a student) the response was strengthened. If, however, the response was followed by an "annoyer" (such as no reward for an animal or an incorrect response for a student), the response was weakened.²⁵

²⁴Helen Rowan (ed.), "Not from Teaching but from Questioning," Carnegie Corporation of New York Quarterly, IX, October, 1961, p. 1.

²⁵Winfred F. Hill, Learning, A Survey of Psychological Interpretations (San Francisco, 1963), p. 58.

Like many experimental psychologists, Thorndike believed that the carefully conducted and statistically controlled research of the scientific laboratory held many clues for the improvement of educational methods; and he voiced regret that the leading educators failed to use these findings to advantage in the educational process.

In 1912 Thorndike wistfully described what today would be called a programmed textbook:

If, by a miracle of mechanical ingenuity, a book could be so arranged that only to him who had done what was directed on page one would page two become visible, and so on, much that now requires personal instruction could be managed by print. Books to be given out in loose sheets, a page or so at a time, and books arranged so that the student only suffers if he misuses them should be worked out in many subjects.²⁶

In the early 1920's, S. L. Pressey of Ohio State University developed the first prototype of the teaching machine. He originally used this machine to give and score tests. Later he discovered that if his new device were changed somewhat students would learn more because they would have to obtain the correct answer before continuing with the test.²⁷

When B. F. Skinner, a Harvard behavioral psychologist, made known his research results between 1954 and 1958, he added the last link to the chain of theories which underlie programmed instruction. By carefully controlling and manipulating the behavior of pigeons in a laboratory experiment, he taught them to play ping pong. He related this

²⁶Edward L. Thorndike, Education (New York, 1912), p. 155.

²⁷S. L. Pressey, "A Simple Apparatus Which Gives Tests and Scores --and Teaches," Teaching Machines and Programmed Learning: A Source Book (eds. A. A. Lumsdaine and Robert Glaser) (Washington, 1960), pp. 35-41.

feat to Thorndike's law of effect by making sure that effects did occur as a result of controlling the subject's behavior. He also discovered that he could use certain techniques to manipulate reinforcement; and as a result of this manipulation, he could maintain behavior at certain levels of strength for long periods of time. Skinner's theory led him to make this comment regarding learning:

The whole process of becoming competent in any field must be divided into a very large number of very small steps, and reinforcement must be contingent upon the accomplishment of each step. This solution to the problem of creating a complex repertoire of behavior also solves the problem of maintaining the behavior in strength. By making each successive step as small as possible, the frequency of reinforcement can be raised to a maximum, while the possibly aversive consequences of being wrong are reduced to a minimum.²⁸

Day summarized the principles resulting from Skinner's research as follows:

1. Learning proceeds more easily if it is acquired in tiny steps.
2. Active participation is more effective than passive participation.
3. Rewards strengthen or reinforce learning; and the sooner the reward, the stronger the reinforcement.
4. Learning is best when a student proceeds at his own pace.²⁹

The theories upon which programmed instruction is based have been developed by great teachers and psychologists from ancient Greek times to the twentieth century. To implement these theories, however, certain principles had to be devised so that a field of knowledge could be systematically and logically shredded into "learning" material--the program.

²⁸B. F. Skinner, "The Science of Learning and the Art of Teaching," Harvard Educational Review, XXIV (Spring, 1954), pp. 86-97.

²⁹Elmore Day, "Implications for the Teaching of Business by Programmed Learning," American Business Education, XVII, May, 1962, pp. 221-23, 26.

Major Principles of Linear Programming

At this time no substantial body of material involving programming principles is encompassed by a course as such. However, through experimentation based upon the theories supporting programming, certain facts have been discovered which form the foundation for a set of principles. The publication of experiments creates a starting point for other experiments designed to explore and expand the existing principles.

Three approaches to programming exist at the present time. In the sequential approach, also known as the linear, extrinsic, recall, Skinner, or constructed-response approach, the order of the teaching items is fixed and is the same for all students. Only time, not material, is permitted to vary. A frame consists of a small bit of information to which the student must construct a response, usually written.³⁰

In the branch approach, also known as the Crowder, recognition, or intrinsic approach, the student is generally confronted with multiple-choice questions to which he responds by selecting the correct answer; and he is permitted to move through the program by branching in a manner to avoid questions he has shown himself capable of answering.

The third approach actually consists of many approaches--all combinations of the first two. The more that experimenters learn about programming techniques, the more background they have for modifying existing techniques.

Experimentation in depth involving programming methods has been conducted by the armed forces, primarily the Human Research Unit of the

³⁰Melching, et al., p. 10.

U. S. Army Air Defense Command at Ft. Bliss, Texas. The persons performing this research are chiefly civilian psychologists whose services have been contracted by the Department of Defense. These well-trained specialists, provided with abundant funds and a reservoir of subjects, have probably developed the most comprehensive set of programming principles available. Linear programming principles from this source were selected for review because they are applicable to the present study:

1. The size of each step is very small--one or two sentences.
2. Information in the initial steps is simple and easy to understand, and the responses are so self-evident that the student will not be likely to make errors.
3. Each item requires the student to construct his response by filling in a blank, thus completing a sentence.
4. Blanks in sequential programs should be at or near the end of the frame rather than at the beginning.
5. Because a sequential program strives for errorless learning, the programmer gives each student much guidance in the form of cues, hints, or prompts.
6. The number of cues and hints will be faded (vanished) in subsequent frames of the program.³¹

Constructing a Program

Although the first literature on programmed instruction began to appear about 1958, the broad general outline of programming construction is fairly well established. The activities involved in constructing a program are:

1. Specify the objectives of the course.
2. Prepare the criterion tests based on the objectives.
3. Outline the course consistent with the objectives.
4. Write the program.
5. Have an internal review of the program.
6. Administer the program and tests to selected subjects.
7. Revise the program.
8. Give the program a formal test.³²

³¹Ibid., pp. 95-100.

³²Ibid., pp. 13-14.

If preparing a program accomplishes little else, it does require the programmer to look intently at the objectives of the course, to analyze them, and to defend them. Actually specifying the objectives in writing demands that the programmer state in explicit terms the accomplishments the students should reflect upon completion of the course.

The criterion test should be prepared or selected to sample the objectives of the program. Initially this test will be helpful in determining program strategy, and later it will be used to determine the effectiveness of the programmed instruction.

A teaching outline is in reality a detailed outline of the material to be taught. It includes examples, illustrations, etc.

With the teaching outline as a guide, the frames are written.

An internal review of a program covers the technical accuracy, writing style, and omissions in the content. The programmer often has a specialist perform this review.

The programmer pretests three to five students who are representative of the target population and evaluates the program with them. He notes the problems each student has and then gives a criterion test when the student completes the program.

Program revision occurs after each phase of evaluating the program with a group of representative students until finally a satisfactory program is constructed.

After the program is deemed appropriate, it is administered to the target population, which is then given the criterion test. In an experimental setting this test can be used to determine the proficiency developed by the program and the average time required by the students to complete the program.

Many experiments have been performed to compare the programmed instructional method with conventional methods of instruction.

Experiments in Methods and Uses of Programmed Instruction

This investigator searched Dissertation Abstracts from Volume XIV through Volume XXVI, covering the period from 1954 (when Skinner first made known his findings) through March, 1966. The first studies involving programmed instruction were found in Volume XXIII, which includes those completed in 1962. At least 30 such studies were published in Volumes XXIII through XXVI. From these published summaries it is clear that researchers have utilized programmed instruction methods and techniques at all educational levels--grade school, junior high school, high school, and college--and in a variety of courses.

A thorough search of the Business Education Index revealed that the first references to programmed instruction occurred in 1960.

Gregory made no mention of programmed instruction in the publication of her findings resulting from an analysis of the literature from September, 1947, through April, 1958.³³ Therefore, one can assume that business educators were not using, or were not writing about, programmed instruction prior to April, 1958.

Large business organizations, always on the alert for a means to decrease costs and increase profits, initiated programmed instruction courses before educators had the confidence to try this new method. At International Business Machines, programmed instruction reduced by 47-

³³Jaunita C. Gregory, "An Analysis of the Literature for Reports of the Utilization of Audio-Visual Materials in Shorthand Instruction," National Business Education Quarterly, XXVIII, October, 1959, pp. 26-27.

per cent of the amount of time required to train customer engineers in the complex 7070 computer system. Operators in a large telephone company were trained in six days with programmed instruction, whereas traditional methods required ten days.³⁴

When business firms disclosed that programmed instruction could teach as well as conventional methods of instruction and in less time, the twin criteria of effectiveness and efficiency were born.

Experiments relating to the effectiveness and efficiency of programmed instruction will be discussed with reference to the following factors: methods of response, span of retention, substitution for conventional course instruction, and supplement to conventional course instruction.

Determining the Best Method of Response

Overt response, the writing of an answer; covert response, the mental reflection resulting in an answer; and free choice, selection of either method; were examined in two experiments to determine their effects on achievement. Wells found no significant difference in the effectiveness of the three methods.³⁵

Lindbeck, on the other hand, found that an overt response was more effective in a program teaching specific, detailed concepts and

³⁴Arthur Oriel, "Programmed Instruction," Advanced Management-Office Executive, I, September, 1962, pp. 33-35.

³⁵William Paul Wells, "Effects of Three Different Response Modes on Programmed Learning Achievement," Dissertation Abstracts, XXVI (Ann Arbor, 1966), p. 5311.

that a covert response was more effective in a program teaching general concepts.³⁶

In a comparison of linear and branching techniques, Beane discovered that there was no significant difference in the effectiveness of the two; however, the branching program was significantly more efficient than the linear program.³⁷

In a study to determine the effect of a selected mode of response upon the span of retention, Hall found that better retention was achieved in children of higher intelligence with the large-step programs and multiple-choice responses. Children of average and lower intelligence, however, achieved better on the small-step program with constructed responses.³⁸

While the preceding studies involved the comparison of one programmed instruction group with another such group, the following experiments pertaining to span of retention were designed to compare the retention of a group under programmed instruction with that of a group taught in the conventional manner.

³⁶Joy S. Lindbeck, "A Study of the Effects of Response Mode on Programmed Textbook Learning Relative to Atomic Structure," Dissertation Abstracts, XXVI (Ann Arbor, 1965), pp. 226-227.

³⁷Donald Gene Beane, "A Comparison of Linear and Branching Techniques of Programmed Instruction in Plane Geometry," Dissertation Abstracts, XXIII (Ann Arbor, 1963), pp. 4252-4253.

³⁸Keith Allen Hall, "The Effects of Ability of Pupils, Size of Step, and Type of Cue on Learning with Programmed Materials," Dissertation Abstracts, XXIV (Ann Arbor, 1964), p. 5243.

Determining the Best Method to Increase Span of Retention

Three experiments were performed to determine which was the more effective and efficient method of increasing the span of retention. Two experimenters, Johnson³⁹ and Householder,⁴⁰ found no significant difference in retention between users of programmed instruction and students taught by a conventional method. Both found that the programmed instruction was more efficient than the conventional methods utilized in the experiments.

Stanton, on the other hand, found that programmed instruction was significantly more effective than conventional instruction in increasing the span of retention and that it was more efficient as well.⁴¹

The primary aim of these experiments was to determine the effect of programmed instruction on the span of retention by comparing this method with a conventional method. Many experiments have been conducted on entire courses to compare the effectiveness and efficiency of programmed instruction with the effectiveness and efficiency of conventional methods.

³⁹Kenneth Albert Johnson, "Programmed Instruction Versus Conventional Teaching: A Study of Learning and Retention in Language Arts," Dissertation Abstracts, XXV (Ann Arbor, 1964), p. 3434.

⁴⁰Daniel Lee Householder, "Effects of Programmed Instruction upon Initial Learning, Retention, and Subsequent Learning from a Textbook," Dissertation Abstracts, XXIV (Ann Arbor, 1964), p. 4582.

⁴¹Fred Elbert Stanton, "Effectiveness of a Programmed Text on the Retention of English Grammar at the Ninth Grade Level," Dissertation Abstracts, XXIII (Ann Arbor, 1963), pp. 4625-4626.

Using Programmed Instruction as a Substitute
for Conventional Instruction

Fourteen experiments have been conducted to compare a complete course taught by a conventional method with the same course taught by programmed instruction to determine the relative effectiveness and efficiency of the programmed method.

Eleven of these experimenters, Taylor,⁴² Levine,⁴³ Smith,⁴⁴ Fishell,⁴⁵ Grell,⁴⁶ Skogman,⁴⁷ Zabka,⁴⁸ Dobyns,⁴⁹

⁴²Helen Williams Taylor, "Development and Evaluation of Programmed Materials in the Presentation of Theory in Beginning Shorthand Classes," Dissertation Abstracts, XXV (Ann Arbor, 1964), p. 1255.

⁴³Stanley Louis Levine, "Programmed and Teacher Oriented Instruction in a Computer Programming Course," Dissertation Abstracts, XXV (Ann Arbor, 1964), p. 3436.

⁴⁴Norman Hankele Smith, "The Teaching of Elementary Statistics by the Conventional Classroom Method of Instruction versus the Method of Programmed Instruction," Dissertation Abstracts, XXIV (Ann Arbor, 1964), pp. 3643-3644.

⁴⁵Kenneth Nelson Fishell, "Utilization Patterns of Programmed Materials in the Junior High School," Dissertation Abstracts, XXV (Ann Arbor, 1964), pp. 2881-2882.

⁴⁶Lewis A. Grell, "Comparative Effectiveness and Efficiency of the Teaching of Spelling by Use of a Programmed Instruction Method and a Conventional Textbook Method," Dissertation Abstracts, XXIV (Ann Arbor, 1964), pp. 5242-5243.

⁴⁷Keith W. Skogman, "Conventional versus Programmed Instruction in English Grammar at Dana College," Dissertation Abstracts, XXV (Ann Arbor, 1964), pp. 3443-3444.

⁴⁸Robert Zabka, "A Field Study Contrasting Programmed Instruction and the Traditional Classroom Presentation in Grades Seven and Eight," Dissertation Abstracts, XXIII (Ann Arbor, 1963), pp. 3263-3264.

⁴⁹Roy Armstead Dobyns, "An Experiment with Programmed Instruction in Teaching College Algebra," Dissertation Abstracts, XXIV (Ann Arbor, 1963), pp. 1936-1937.

Wardian,⁵⁰ Meadowcroft,⁵¹ and Kellems,⁵² found that classes taught by the programmed instruction method achieved as well as (no significant difference) the comparable class taught by the conventional method.

Two experimenters, Otting⁵³ and Pinkerton,⁵⁴ discovered that the programmed group achieved significantly better in less time than the group taught by a conventional method.

One experimenter, Legg,⁵⁵ found that the programmed group did not achieve as well as the group taught by a conventional method. He attributed this situation to the fact that the programmed group used less than half of the time consumed by the control group to accomplish the work.

⁵⁰Jeanne Foster Wardian, "An Experiment Concerning the Effectiveness of Programmed Learning for Use in Teaching the Fundamentals of Music," Dissertation Abstracts, XXIV (Ann Arbor, 1963), p. 1101.

⁵¹Bruce Allen Meadowcroft, "An Experiment with Programmed Materials in Seventh Grade Arithmetic," Dissertation Abstracts, XXVI (Ann Arbor, 1965), pp. 1514-1516.

⁵²Robert Leo Kellems, "A Comparative Analysis of the Effect of the Use of a Programmed Text on Achievement and Efficiency in College Algebra," Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 4577-4578.

⁵³Kenneth Andrew Otting, "Programmed Materials versus the Textbook: A Comparison of Effectiveness, Efficiency and Motivational Aspects in a Twelfth Grade American Government Course," Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 5157-5158.

⁵⁴James Egan Pinkerton, "A Study of the Feasibility of Using Programmed Instruction in Teaching Business Communications," (Unpub. Doctor's thesis, University of Arkansas, 1963).

⁵⁵Otto Pearl Legg, "Programmed Instruction and Lecture-Discussion Methods Compared for Effectiveness in Teaching Agricultural Finance to Vocational Agriculture Students," Dissertation Abstracts, XXIII, (Ann Arbor, 1963), 2447-2448.

All of the fourteen experimenters found that programmed instruction was significantly more efficient than the conventional method with which it was compared.

These fourteen experiments have involved programmed instruction of a complete course. Many other studies have been made to compare the achievement of students using programmed instruction on some part of a course with the achievement of a group studying that part in a conventional manner.

Using Programmed Instruction to Supplement Conventional Instruction

In nine cases experimenters compared the use of programmed materials and conventional materials as supplements to conventional class instruction.

One of these experimenters, Brown,⁵⁶ used programmed materials for supplementary instruction in a physical science course for students who made "C" or below during the previous term. He found that programmed supplementary materials were as effective as conventionally prepared supplementary materials and could be completed in less time.

Wriggle compared the amount and nature of teaching help necessary for optimum achievement in programmed classes. One control group was instructed in the conventional manner and four experimental groups were established and given teacher assistance as follows: 1. The teacher monitored the programmed learning session. 2. The teacher gave no help in class. 3. The teacher answered questions. 4. The

⁵⁶Willard Andrew Brown, "An Experiment Using Programmed Material as Supplemental Instruction in College Physical Science," Dissertation Abstracts, XXV (Ann Arbor, 1964), p. 1041.

teacher supplemented the program by reviewing basic concepts. Wriggle found no significant difference in the effectiveness of the four methods of teacher help and concluded from the total experiment that programmed instruction was as effective as conventional instruction and significantly more efficient.⁵⁷

Four of the nine experimenters programmed only a part of a course. They then compared the effectiveness and efficiency of the programmed part with the same part taught in a conventional manner. Three of these experimenters, Moore,⁵⁸ Kantasewi,⁵⁹ and Fillmer,⁶⁰ found that the programmed part of their courses was as effective as, but more efficient than, that part when taught by conventional methods.

Henson, however, found that the programmed method of presenting a part of the Gregg shorthand theory was significantly more effective and efficient than the conventional instructional method used for that same part of the course. The experimental group studied the first five chapters of Gregg shorthand theory by programmed instruction and

⁵⁷Lawrence Kay Wriggle, "The Amount and Nature of Teacher Help Necessary for Optimum Achievement Through Use of Programmed Learning Devices," Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 5802-5803.

⁵⁸Jerry Ray Moore, "An Experiment in Programmed Instruction: Voting in Iowa, Ninth Grade Civics," Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 5156-5157.

⁵⁹Nippon Kantasewi, "Experiments in the Use of Programmed Materials in Teaching an Introductory Course in the Biological Sciences at the College Level," Dissertation Abstracts, XXV (Ann Arbor, 1964), pp. 2378-2379.

⁶⁰Henry Thompson Fillmer, "The Construction and Experimental Application of a Programmed Course in Verb Usage for Grade Four," Dissertation Abstracts, XXIII (Ann Arbor, 1962), p. 2031.

achieved significantly higher vocabulary and transcription scores than the group which was taught the same theory by a conventional method.⁶¹

Three of the nine experiments compared the use of programmed material for homework with the conventional homework assignment. Two experimenters, Bobier⁶² and Thompson,⁶³ discovered that programmed homework assignments were just as effective as the conventional homework assignment but significantly more efficient.

Waters found a significant difference in favor of programmed homework in shorthand over the conventional homework procedures. It appeared, however, that the programmed method was not as efficient as the conventional method.⁶⁴

Summary

Many studies have been undertaken to analyze the kinds of errors which occur during the transcription process; however, little effort has been put forth to develop remedies for these errors.

⁶¹Oleen Majors Henson, "The Development, Utilization, and Effectiveness of Programmed Materials in Gregg Shorthand," Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 4000-4001.

⁶²Darold Thomas Bobier, "The Effectiveness of the Independent Use of Programmed Textbooks in Aiding Students to Overcome Skill Weaknesses in English Mechanics and Arithmetic," Dissertation Abstracts, XXV (Ann Arbor, 1964), pp. 3424-3425.

⁶³Charles Edwin Thompson, "The Appraisal of Special Procedures for Below Average Students in Basic Technical Course, United States Air Force," Dissertation Abstracts, XXV (Ann Arbor, 1964), pp. 2887-2888.

⁶⁴Max LeRoy Waters, "An Experimental Study of Programmed Shorthand Homework" (Research Study No. 1), Dissertation Abstracts, XXV (Ann Arbor, 1965), pp. 4011-4012.

Programmed instruction is based on sound psychological theories which have been proved in the laboratory, implemented by trained psychologists, and adapted in the educational process. Psychologists have proved and educational experimentation has confirmed that programmed instruction, generally speaking, is as effective as conventional instruction and significantly more efficient.

In the area of shorthand, only the theory has been subjected to programming; therefore, the field of programmed instruction of related learnings in transcription is open for experimentation.

CHAPTER III

METHOD OF ANALYSIS AND PROCEDURES

This study was an attempt to evaluate two methods of reviewing punctuation in an advanced transcription class to determine which is the more effective and efficient method. The researcher used a design consisting of a two-way classification with covariables. The classification included (1) teacher or class and (2) method. To answer certain questions basic to testing the hypotheses, the following statistical techniques were employed: analysis of variance, analysis of covariance, standard deviation scores, and the Mann-Whitney U. This design was suggested by the statisticians associated with the office of the Vocational Education Research Coordinator, Oklahoma State University, after a discussion of the experiment, its variables and controls.

Analysis of Data

To determine whether the four classes (two control and two experimental) were comparable with respect to mental ability, verbal ability, and knowledge of the subject matter, analysis of variance was used.

Analysis of Variance

The analysis of variance is used "to provide an efficient test of the significance of the difference between two or more groups simultaneously."¹ This technique is employed when two or more groups are to be compared on the basis of a "variable or continuum characteristic."² In this experiment this particular analysis is appropriate because the members of the groups are compared on scores derived from standardized tests: the CEEB (College Entrance Examination Board), Part II of the Mechanics of Expression of the Cooperative English Test, and Part II of the New Purdue Placement Test.

Because the groups are disproportionate, the analysis of variance using a correction for disproportionality is appropriate.

Analysis of Covariance

The technique employed in the selection of the sample in this experiment is called by Gage "The Nonequivalent Control Group Design," and he evaluates its power to control as follows:

The more similar the experimental and the control groups are in their recruitment, and the more this similarity is confirmed by the scores on the pretest, the more effective this control becomes.⁴

¹James E. Wert, Charles O. Neidt, and J. Stanley Ahmann, Statistical Methods in Education and Psychological Research (New York, 1954), p. 172.

²Ibid.

³Ibid., pp. 211-225.

⁴Gage, pp. 217-218.

He further states that if the above qualifications are met, this design can control:

. . . the main effects of history, maturation, testing, and instrumentation, in that the difference for the experimental group between pretest and posttest (if greater than that for the control group) cannot be explained by main effects of these variables such as would be found affecting both the experimental and control group.⁵

Wert, Neidt, and Ahmann state that

. . . if groups are to be compared on the basis of their response to a criterion, and if individual differences among the members within the groups are either known to influence the criterion or suspected of such influence, an attempt must be made to control these individual differences.⁶

Analysis of variance can be applied to data which have been stratified, but it cannot simultaneously include other measurements in the tests of significance.

Wert, Neidt, and Ahmann continue:

It is apparent that if unavoidable influences on the criterion are not controlled, the presence or absence of differences among groups being compared on the basis of the criterion cannot be specifically attributed to the treatments being tested.⁷

Therefore, analysis of covariance is used as a means of attaining a measure of control of individual differences. It "incorporates elements of the analysis of variance and of regression."⁸ This technique provides tests of significance for the comparison group, the members of which have been measured with regard to one or more variable characteristics other than the criterion.

⁵Ibid., p. 218.

⁶Wert, Neidt, and Ahmann, p. 343.

⁷Ibid.

In this study the members of the groups were measured for mental ability, verbal ability, and initial knowledge of the subject, in addition to the criterion; therefore, analysis of covariance is the appropriate design to answer the following questions basic to testing the hypothesis: (1) Did classes using the programmed material do significantly better on punctuating printed matter than the control classes? (2) Did classes using the programmed material do significantly better on transferring their knowledge of punctuation to transcription from shorthand notes than the control classes? (3) In the control classes did one instructor produce results significantly better than the other? (4) In the classes using the programmed materials, did one instructor produce results significantly better than the other? (5) Did the programmed classes for each instructor do significantly better than his control classes?

Standard Deviation Scores

Garrett regards standard deviation as the "most suitable index of variability."⁹ Therefore, the standard deviation scores were used to determine the variability among the control and experimental groups relative to the time consumed in reviewing punctuation.

Mann-Whitney U

One of the most powerful of the nonparametric tests is the Mann-Whitney U, which requires at least ordinal measurement, is appropriate

⁸Ibid.

⁹Henry E. Garrett, Statistics in Psychology and Education (New York, 1958), p. 49.

for small groups, and is equal to the parametric t-test. The Mann-Whitney U is a ranking test providing a z-score which is used to determine whether two independent groups have been drawn from the same population; that is, to determine whether they have the same distribution on a certain characteristic.¹⁰ The level of significance designated by the z-score will, therefore, answer this question: Were each instructor's programmed classes significantly more efficient than his control classes?

Experimental Procedures

The first eight parts of this section will be discussed in the order used by Melching, et al., to summarize programming activities.¹¹ The last part will describe the application of these activities to the present experiment.

Specifying the Objectives

In specifying the objectives, one refers to the goals of the program itself. These goals must be stated in a specific manner, describing precisely what the student is expected to accomplish as a result of completing the program. Performance standards in terms of accuracy and speed are to be stated in such a way that they can be precisely followed by a casual reader of the programming experiment. Ambiguous

¹⁰Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York, 1956), pp. 116-127.

¹¹Melching, et al., pp. 13-14.

terminology, such as "know, accept, understand, and believe," is to be discarded in favor of specific terms, such as "can punctuate."¹²

The investigator used as the terminal program objectives the hypotheses of this study: (1) Review of punctuation by means of programmed instruction will be significantly more effective than the conventional methods of review used during the transcription course. (2) Review of punctuation by means of programmed instruction will be significantly more efficient than the conventional methods of review used during the transcription course. The .05 level was used to determine significance.

After the over-all objectives were established, the learning objectives were constructed. These objectives formed a guide for the investigator during the frame-writing process.

The learning objectives, broadly stated, were as follows: The student must be able to punctuate (1) printed matter and (2) transcripts using the following marks of punctuation: period, question mark, comma, semicolon, quotation marks, dash, and apostrophe. These objectives, of course, must be met before the student can master the terminal objectives.

The next step was to prepare or select a criterion test.

Selecting the Criterion Test

To sample the objectives, the investigator sought an appropriate criterion test. Thorough perusal of the literature on testing narrowed

¹²Ibid., p. 54.

the choice to two acceptable tests: The New Purdue Placement Test in English and the Cooperative English Test.

The New Purdue Placement Test is composed of mutilated copy; that is, it contains punctuation errors which the student must recognize. On the other hand, in the Cooperative English Test the punctuation is omitted; and the student is required to select the correct punctuation mark from those indicated as possible answers. The investigator elected to use both of these tests, believing that each would test the objectives equally well and one would serve to accentuate the validity of the other in this experiment.

The New Purdue Placement Test is described by Buros as follows:

The authors of the New Purdue Placement Test in English state that its primary purpose is 'to sample the knowledge possessed by high school seniors or college freshmen of what is called "good English."' An examination of the content of the test reveals that the authors were either unnecessarily modest in this claim or had in mind a much broader concept of 'knowledge' than that used by the reviewer. While it is clear that knowledge is required to respond correctly to the test exercises, the successful examinee must also be able to apply such knowledge.¹³

Form E of the New Purdue Placement Test in English was used as the pretest and Form D as the posttest (see Appendix A). Each form has 45 punctuation checkpoints.

The second criterion test, the Cooperative English Test: Higher Level, is described by Buros as follows:

The point of view of the test-makers is 'modern'; they included as sources the Experience Curriculum of the National Council of Teachers of English, Jespersen and Crumes, and studies of present-day use. This point of view is evident in their statement: 'All so-called "errors" in written English which are

¹³Oscar Krisen Buros, ed., The Fifth Mental Measurements Yearbook (Highland Park, 1959), p. 199.

considered by most linguistic scholars to be good modern use are eliminated.¹⁴ A multiple-choice item form is used throughout the test.¹⁴

The Cooperative tests of Mechanics of Expression and Effectiveness of Expression are generally well-made tests that should be useful as measures of the kinds of skills suggested in this analysis (application to mechanics).¹⁵

In the punctuation section, the subject is asked to select from specified alternatives the appropriate punctuation to be inserted into a designated section of an incompletely punctuated passage. Thus the materials on punctuation . . . present incomplete rather than mutilated copy to the students.¹⁶

Form T was used for the pretest and Form Y for the posttest (see Appendix A). Each form has 45 punctuation checkpoints.

To evaluate the transfer of the students' punctuation knowledge to the transcription process, a mailable copy test was needed. A thorough check of the published dictation material revealed no series of letters having a good sample of the punctuation being taught which could be dictated within 15 minutes. Therefore, the researcher wrote or adapted three letters, two credit letters and one sales letter, having a total of 53 punctuation checkpoints (see Appendix A). The syllabic intensity, determined according to the standard rule of 28 syllables per quarter minute, ranged from 1.5 to 1.7. Although many authorities consider 1.4 to be average syllabic intensity, the 1.5-1.7 range for this series of letters was deemed appropriate as the experimental classes were in the advanced stage of the shorthand program. The letters ranged in length from 149 to 255 words, and each had four paragraphs.

¹⁴Oscar Krisen Buros, ed., The Fourth Mental Measurements Yearbook (Highland Park, 1953), p. 155.

¹⁵*Ibid.*

¹⁶*Ibid.*

To assure uniformity in the checking of these transcripts, the following guides were established:

1. An error in punctuation was not considered if the transcription was incorrect; for example, Belmont for Belmont's.
2. If a word or words were omitted, the punctuation marks involved were ignored.
3. A colon was accepted for a comma on letter 3, where two sentences were included in one quotation, as it was believed that the instructions were not sufficiently clear in this instance.
4. Where dual punctuation was required, for example a period and a quotation mark, errors were counted as follows:
 - 1 error quote not used
 - 1 error correct punctuation but out of order
 - 2 errors both marks incorrect
 - 2 errors one mark incorrect and one mark omitted.

The investigator used the same mailable copy test for both the pre-test and posttest because (1) eight weeks elapsed between the two tests and (2) the students were not aware of the experimental situation; and, therefore, they did not realize that they would take the same test again.

As a result of specifying the objectives, the content of the program was established; however, it was necessary to determine the sequence in which the material would be taught. Therefore, a teaching outline was prepared.

Preparing the Teaching Outline

The purpose of a teaching outline is to determine the sequence of the material and the illustrations which will best clarify it.

During the fall quarter, 1965, the researcher constructed an outline of the material to be programmed, including what experience had

revealed to be the common usages of each punctuation mark in transcription classes. To assure uniformity in presenting the rules to the control classes, the researcher and cooperating instructors decided that a specific reference manual should be followed. Gavin and Hutchinson's manual was adopted.¹⁷ The outline was given to the instructors of the winter quarter control classes, thereby assuring that they would include all of these usages in their punctuation review. The same outline was placed in the programmed booklet prepared by the researcher (see Appendix B). This outline served as a guide to the instructors and students in the spring quarter experimental classes.

During the fall quarter the investigator composed numerous sentences for each of the punctuation usages. These sentences were given to the control group instructors to use as illustrative material during the review process. As a control on materials, these same sentences were incorporated in the programmed booklet used by the experimental classes.

The experimenter had to prepare a programmed booklet because only three programs on punctuation were available,¹⁸ and these programs were not appropriate for college students in a business course.

Writing the Program

The program involved in this experiment is linear in nature; that is, a student progresses from one frame to the next throughout the

¹⁷Ruth E. Gavin and E. Lillian Hutchinson, Reference Manual for Stenographers and Typists (New York, 1961).

¹⁸Lincoln F. Hanson, ed., A Guide to Programmed Instructional Materials (Washington, 1963), pp. 176-181.

booklet--with one exception. A looping process was employed, permitting a student who answered a frame of test questions accurately to skip the following series of review test questions. This technique was utilized to permit students with more extensive background to avoid repetitious material and proceed more rapidly.

Students answered the questions by writing the letter, word, or word followed by the appropriate mark of punctuation in a blank on the answer sheet (see Appendix B). This procedure is called the constructed-response method. After the student wrote his answer, he turned the page and noted the correct answer. If his answer was correct, he proceeded to the next frame. If his answer was incorrect, he reviewed the frame on which he made the error and then proceeded to the next frame.

As the program is a review program for students on the college level, an attempt was made to write it with the minimum number of cues and prompts. Sentence structure is reviewed in the program; however, it is assumed that students are familiar with the parts of speech and their relationship within a sentence.

More frames are devoted to comma usage than to any other punctuation mark simply because there are more uses for the comma than for other marks of punctuation.

During the frame-writing process, an internal review is necessary.

Making an Internal Review

To assure that the content is accurate, the writing style is appropriate, and the total program meets its objectives, the program

should be reviewed. It may be reviewed by a programming authority or by experienced instructors who teach in the subject area in which the program is written.

The frames were typed on 3 x 5 cards, and the answers were typed on the backs of the cards. The first 69 frames constructed were criticized by a Denver Public School System English Coordinator who had experience in writing programmed material.¹⁹ His main comments involved the cueing of the frames. He suggested that, as the purpose of the program was to review punctuation at the college level, the minimum number of cues be used. The remainder of the frames were written in line with his critique and suggestions and were reviewed by two experienced instructors in the transcription area at Colorado State University.

Even though programmed material has been reviewed and criticized by an authority or by experienced instructors, it may still not accomplish its purpose. The crucial test comes when students representative of the target population review the material.

Pretesting the Program

In a preliminary test of the program content, the programmer evaluates his program with individual students who are representative of his final population and who have taken the selected pretests.

Three students were selected to participate in the review process. The three represented average, low, and high intelligence brackets, according to a subjective evaluation by their instructors. After being

¹⁹Wilbur Schramm, "Programmed Instruction in Denver," Four Case Studies of Programmed Instruction (New York, 1964), pp. 29-40.

pretested, the students came to the office individually at regularly scheduled times during the winter quarter and reviewed the frames which had been written.

A fourth student who had also been pretested came at regularly scheduled times to work through the program as far as it had been revised. This procedure, along with the student reviews, served not only as a final review but also to establish a means for determining the time which might be required to complete the entire program. All four students were given the criterion tests and completed them with at least 95 per cent accuracy.

Revising the Program

The experienced instructors who analyzed the frames for content and clarity performed this task while the frames were in a rough draft stage. The frames were then revised and given to the first student evaluator for review.

The same group of frames was discussed with each of the three student evaluators. The frames which these students considered ambiguous or confusing were revised. At each review session the students evaluated both the new frames which had been written and the frames which had been revised.

The student who worked through the program after the revisions made further suggestions regarding certain frames, and these frames were subsequently revised and again reviewed by the students.

Giving the Program a Formal Test

The purpose of this study was to compare the effectiveness and efficiency of reviewing punctuation by means of programmed material with the effectiveness and efficiency of a conventional method of review. Therefore, an experiment was planned to include two classes using the programmed material prepared by the investigator and two classes using a conventional method of the instructor's choice. Both control and experimental groups had access to the same illustrative sentences. In the control group these sentences served as examples of the rules, and in the experimental group they were incorporated within the frames.

The programmed material was presented to the student in a booklet containing 396 frames on 132 pages. Each page was divided horizontally into three parts; and the student worked his way through the book on the top row of frames, then the middle row, and finally the bottom row. The answer to each frame was shown at the top of the succeeding frame. After a student answered a question, he checked the next frame to determine whether or not his answer was correct. If his answer was correct, he proceeded; if not, he reviewed the frame on which he made the error.

Each instructor determined the number of frames to be assigned each week. The students completed these frames outside of class, and they recorded on their answer sheets the minutes required to finish the assignment. The students were permitted to keep the booklets but had to submit the answer sheets to the instructor at the end of the quarter so that a record of the time could be obtained.

The supervisor of the Administrative Services Area and the investigator selected two experienced instructors to conduct the classes in this experiment. Each instructor taught one experimental and one control class. Both instructors had approximately the same amount of experience. One instructor, hereinafter designated as A, had eight years of experience in teaching at college level; the other, hereinafter designated as B, had approximately four years of experience in teaching at college level.

Both instructors were interested in the experiment and agreed to cooperate in conducting the experiment.

Conducting the Experiment

The control group, composed of two sections containing a total of forty students, started at the beginning of the winter quarter, 1966. Early in the second week of instruction, the two printed pretests were administered to the classes. The Cooperative English Test (Form T) required 15 minutes and the New Purdue Placement Test (Form E), 11 minutes. The mailable copy pretest was dictated by each instructor in his double period during the second week of the quarter.

Each instructor reviewed punctuation according to the method and with the intensity he thought appropriate for his class. Instructor A reviewed the rules in a systematic manner, starting at the beginning of the quarter. Instructor B reviewed the rules whenever his analysis of the transcripts indicated that the students needed to review certain rules. Each instructor, however, covered all of the rules outlined for

the experiment. The instructors maintained a record of the time used to review punctuation during the quarter.

During the last week of the winter quarter, Form Y of the Cooperative English Test and Form D of the New Purdue Placement Test were administered to the classes, and each instructor dictated the mailable copy posttest (same form) during the double period.

The experimental group, composed of two sections containing a total of 34 students, started at the beginning of the spring quarter, 1966. The pretests were administered during the second week of the quarter.

At the beginning of the third week of the quarter, each student in the experimental group received a programmed booklet and an answer sheet. Before the programmed material was distributed, the instructors explained that punctuation review would thereafter be conducted by means of the booklet to conserve class time for transcription practice.

The instructors had worked through the programmed booklet and each made the assignments in accordance with his estimation of the needs and ability of his particular class. When the first assignment was made, the students were instructed in the procedure to be used for progressing through the program and completing the answer sheets.

Each instructor offered to clarify in class any frames which the students did not understand. The instructors maintained a record of the time required to clarify or explain these frames.

During the last week of the quarter, the instructors administered the printed posttests and dictated the mailable copy posttest.

The students were not aware that an experiment as such was being conducted. They regarded the use of the programmed booklet as being merely a change in procedure instituted simultaneously by both instructors. At the conclusion of the experimental period, the students were invited to write comments regarding the programmed instruction method on the answer sheet prepared for the programmed booklet. They then submitted the booklets and the answer sheets to their instructors.

While the experimental classes were in process, the researcher gathered the following information from Student Records at Colorado State University: College Entrance Examination Board score (total), College Entrance Examination Board (verbal), English Composition grade, ST 11 grade (previous shorthand class), and ST 22 (Business Communications) grade if the course had been taken. The College Entrance Examination Board tests are secure tests and therefore not included in the appendix.

After the pretests and posttests were administered, they were scored by the investigator and double checked by a student assistant. The scores were then recorded on each student's data card, along with his College Entrance Examination Board scores and the selected grades.

Both the education and mathematics statisticians who served as advisors regarding the statistics involved in this experiment suggested that the letter grades not be used because these grades were not necessarily valid marks of achievement and did not result from an application of a standardized procedure. Consequently, letter grades have not been considered in the statistical computations.

CHAPTER IV

INTERPRETATION OF FINDINGS

The purpose of this chapter is to describe the statistical techniques employed in the analysis of the data and to interpret the results obtained through the use of these techniques.

Initial Comparison of Classes

The first step in the statistical analysis of this experiment was to test the null hypothesis: There is no initial difference in the mental ability, verbal ability, and previous knowledge of the control and experimental groups, as indicated by the group means for each characteristic. Although any difference will be taken into consideration by covariance analysis, the analysis of variance was performed on the dependent variables to determine whether the experimental and control groups were comparable. The structure of the groups is shown in Table 1.

College Entrance Examination Board Total

The analysis of variance applied to the total CEEB scores, index of mental ability, of the groups is shown in Table 2. The degrees of freedom are the same for the remainder of the analysis of variance tables and were obtained as follows: The number of degrees of freedom

for the total is 73, one less than the total number of individuals included in the investigation; the number of degrees of freedom for groups is 3, one less than the number of groups involved; the number of degrees of freedom for within variation is 70, the difference between the two foregoing degrees of freedom, or the number of individuals in each group minus one member, i.e., 24, 12, 14, 20 = 70.

TABLE 1
STRUCTURE OF GROUPS

Computer Number	Groups (4)	Instructors (2)	Students (74)	Quarter
00	Control	B	25	W/66
01	Experimental	B	13	S/66
10	Control	A	15	W/66
11	Experimental	A	21	S/66

TABLE 2
ANALYSIS OF VARIANCE OF MENTAL ABILITY AMONG GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares ^a	Mean Squares ^b	F Score ^c
Total	73	7,297,642.000		
Between Groups	3	245,439.9375	81,813.3125	
Within Groups	70	7,052,202.0625	100,745.7430	F _{3,70} =-1.
00 (CB)	24	1,818,857.5000		
01 (EB)	12	2,203,576.3125		
10 (CA)	14	738.971.0000		
11 (EA)	20	2,290,797.2500		

$$^a \text{Sum of Squares} = \sum X^2 - \frac{(\sum X)^2}{N}$$

$$^b \text{Mean Square} = \text{Sum of Squares/Degrees of Freedom}$$

$$^c \text{F Score} = \text{Between Groups/Within Groups}$$

The F value at the .05 level of significance for 3 and 70 degrees of freedom is 2.74.¹ As the obtained F score is less than unity (1.00), it is not significant at the .05 level. Thus the null hypothesis regarding mental ability cannot be rejected.

College Entrance Examination Board Verbal

In Table 3 the analysis of variance is applied to the verbal scores obtained from the CEEB test to determine whether the groups showed any initial difference in verbal ability.

TABLE 3
ANALYSIS OF VARIANCE OF VERBAL ABILITY AMONG GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	73	425,957.5000		
Between Groups	3	10,381.0000	3460.3333	
Within Groups	70	415,576.5000	5936.8071	$F_{3,70} = 1.00$
00 (CB)	24	185,298.6875		
01 (EB)	12	72,115.0938		
10 (CA)	14	35,875.7500		
11 (EA)	20	122,286.9668		

Here again, the obtained F score is less than 1.00. As the F score indicating significance at the .05 level is 2.74, the obtained F is not significant. Consequently, the null hypothesis regarding verbal ability cannot be rejected.

¹Wert, Neidt, Ahmann, p. 492.

Pretests

To test the hypothesis regarding the initial knowledge of subject matter, the analysis of variance was applied to the pretest scores for the Cooperative English Test, New Purdue Placement Test, and mailable copy test.

The Cooperative English Test

The analysis of variance on the Cooperative English Test, Table 4, shows an obtained F score of 2.6359, which is almost significant at the .05 level. As the obtained F is lower than 2.74, however, it is not significant; and the null hypothesis regarding initial knowledge cannot be rejected insofar as the Cooperative English Test is concerned.

TABLE 4

ANALYSIS OF VARIANCE OF INITIAL SUBJECT MATTER KNOWLEDGE
(COOPERATIVE ENGLISH TEST) AMONG GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	73	417.0947		
Between Groups	3	42.3414	14.1138	$F_{3,70}=2.6359$
Within Groups	70	374.8091	5.3544	
00 (CB)	24	184.2402		
01 (EB)	12	41.6924		
10 (CA)	14	37.7334		
11 (EA)	20	111.1431		

The New Purdue Placement Test

Table 5 shows that the analysis of variance applied to the New Purdue Placement Test resulted in an obtained F score below 1.00.

TABLE 5

ANALYSIS OF VARIANCE OF INITIAL SUBJECT MATTER KNOWLEDGE
(NEW PURDUE PLACEMENT TEST) AMONG GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	73	1,536.5000		
Between Groups	3	59.8140	19.9380	F = -1.
Within Groups	70	1,476.6860	21.0935	
00 (CB)	24	376.0000		
01 (EB)	12	82.0000		
10 (CA)	14	156.4001		
11 (EA)	20	862.2859		

As 2.74 indicates significance at the .05 level, the second pretest on initial knowledge of subject matter reveals that there is no significant difference among the groups and that the null hypothesis cannot be rejected.

Mailable Copy Test

The information presented in Table 6 reveals that when the analysis of variance is applied to the mailable copy pretest, the result is an obtained F of 1.3971, which is not significant at the .05 level. Therefore, the null hypothesis regarding initial knowledge cannot be rejected insofar as the mailable copy test is concerned.

Summary

As shown by Tables 2 through 6, the obtained F score resulting from the application of the analysis of variance to the dependent variables of mental ability, verbal ability, and initial knowledge of

subject matter indicates that there is some difference among the groups but that this difference is not significant at the .05 level. The null hypothesis cannot be rejected; and it may be assumed, therefore, that the classes were comparable with respect to these dependent variables.

TABLE 6

ANALYSIS OF VARIANCE OF INITIAL SUBJECT MATTER KNOWLEDGE
(MAILABLE COPY TEST) AMONG GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	73	704.0000		
Between Groups	3	39.7736	13.2578	$F_{3,70}=1.3971$
Within Groups	70	664.2264	9.4889	
00 (CB)	24	137.7603		
01 (EB)	12	146.9231		
10 (CA)	14	89.7334		
11 (EA)	20	289.8096		

Effectiveness of Programmed Material

The experimental design involved groups which were to be compared on their response to a criterion. As individual differences, such as mental ability, verbal ability, and initial knowledge, are known to influence the criterion test, the analysis of covariance techniques was used to control for them.

The application of the analysis of covariance provides tests of significance for the comparison groups, the members of which have been measured with regard to certain variable characteristics other than the criterion. The subjects in this experiment were measured with

standardized instruments applicable to evaluating mental ability, verbal ability, and initial knowledge of subject matter.

The analysis of covariance was applied to the data to answer certain questions basic to testing the first research hypothesis: Review of punctuation by means of programmed instruction will be significantly more effective than the conventional methods of review used during the transcription course.

Statistics involving the covariance technique were obtained by Mr. Robert Walls, statistician contracted by the Department of Vocational Education, on the IBM 7040 Computer using the June 17, 1964, version of the UCLA program format for covariance (BCMD04V). This program produces the variable means for each group; sums of squares and cross-product matrix for total; sums of squares and cross-product matrix for treatment; sums of squares and cross product matrix for error; inverse of the covariates cross-product matrix for total; inverse of the covariates cross-product matrix for treatment; inverse of the covariates cross-product matrix for error; table of coefficients; table of coefficients, standard errors, and computed t-values; and a final analysis of covariance table with an obtained F score.

Punctuation of Printed Matter

To determine whether the classes using programmed material did significantly better on punctuating printed matter than the control groups, the analysis of covariance was applied to the mean scores obtained from the Cooperative English Test and the New Purdue Placement Test.

The degrees of freedom for all of the covariance analysis computations were obtained as follows: degrees of freedom for total--number of subjects less one degree for obtaining the mean and five for the covariables ($74-6=68$); degrees of freedom within subgroups--subjects less groups minus one ($4-1=3$) less the 5 covariables used ($74-8=65$); degrees of freedom for the difference--total degrees of freedom (68) less within groups (65), or 3 degrees of freedom.

The following questions will be answered in this section:

1. Did classes using the programmed material do significantly better on punctuating printed matter than the control groups?
2. In the control classes did one instructor produce results significantly better than the other?
3. Did the classes of an instructor using programmed instruction produce results which were significantly higher than those achieved by the other instructor?
4. Did the programmed classes for each instructor do significantly better than his control classes?

The Cooperative English Test

To be significant at the .05 level, the obtained F score for 3 and 65 degrees of freedom must be 2.75.² Table 7 indicates that the F score resulting from the analysis of covariance of the Cooperative English Test is 1.969. Thus there is no significant difference between the control and experimental groups in ability to punctuate printed material as far as the Cooperative English Test is concerned.

The differences effected by adjusting all covariables using all the mean values are reflected by the "Adjusted Mean" given in Table 8.

²Ibid.

These differences provide the following answers pertaining to the Co-operative English Test: There is no significant difference in the results produced (1) by the instructors' control classes, (2) by the instructors' programmed classes, and (3) between the instructors' programmed and control classes.

TABLE 7

ANALYSIS OF COVARIANCE OF COOPERATIVE ENGLISH TEST

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	68	201.8461		
Within Groups	65	185.0301	2.8466	$F_{3,65}=1.9670$
Difference	3	16.8160	5.6053	

TABLE 8

TABLE OF ADJUSTED MEANS RESULTING FROM ANALYSIS OF COVARIANCE OF THE COOPERATIVE ENGLISH TEST

Treatment	Instructor	Treatment Mean	Adjusted Mean
C	B	41.6000	41.5978
E	B	41.8462	41.9027
C	A	42.7333	43.3079
E	A	42.5714	42.8429

The New Purdue Placement Test

As shown in Table 9, the analysis of covariance of the second printed test, The New Purdue Placement Test, resulted in an obtained F score of 7.555 for 3 and 65 degrees of freedom.

TABLE 9

ANALYSIS OF COVARIANCE OF THE NEW PURDUE PLACEMENT TEST

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	68	793.2281		$F_{3,65}=7.559$
Within Groups	65	588.0567	9.0470	
Difference	3	205.1714	68.3905	

This F score is .02 higher than that acceptable at the .05 level, 2.75. As a result, there is a significant difference between the control and experimental groups in punctuating printed matter insofar as the New Purdue Placement Test is concerned.

To determine the direction of this difference, the adjusted means from the analysis of covariance of the New Purdue Placement Test are cited in Table 10.

The adjusted means column provides the following answers: (1) Instructor A's control class had a much higher adjusted mean than did Instructor B's control class. This higher mean value would be expected if Instructor A had reviewed punctuation more intensively than Instructor B had. (2) There is no significant difference in the adjusted means obtained when the instructors used the programmed material.

(3) Instructor A's programmed class performed about the same as his control class; however, the programmed class of Instructor B appears to have performed significantly better than his control class. It may be assumed from this fact that the program presented the punctuation review more intensively than Instructor B had presented it in his control class.

TABLE 10

TABLE OF ADJUSTED MEANS RESULTING FROM ANALYSIS
OF COVARIANCE OF NEW PURDUE PLACEMENT TEST

Treatment	Instructor	Treatment Mean	Adjusted Mean
C	B	32.5200	32.5624
E	B	35.2308	35.6320
C	A	37.3333	36.2927
E	A	36.0952	36.5396

As both the Cooperative English Test and the New Purdue Placement Test were standardized and tested on college populations, similar results would be expected to occur from the use of these tests. Both tests required the use of the same punctuation marks; however, it seems to the researcher that the New Purdue Placement Test is somewhat more difficult than the Cooperative English Test. Also, the New Purdue Placement Test contains mutilated copy with incorrect punctuation, while the Cooperative English Test does not. It is possible that the differences in the results obtained are related to the difference in the two tests.

Also, the differences in the results obtained from the two tests may be due to error; the same differences might not occur in another testing. It is also possible that some variable that was not considered, such as motivation, affected the test results. Whatever the reason or reasons for the difference in results obtained from the two tests, the experimental sample was small and cannot be used to make broad inferences.

Mailable Copy Test

To indicate whether the classes using programmed material did significantly better on transferring their knowledge of punctuation to transcription from shorthand notes, the analysis of covariance of the mailable copy test is reported in Table 11.

TABLE 11
ANALYSIS OF COVARIANCE OF THE MAILABLE COPY TEST

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F Score
Total	68	315.1562		$F_{3,65}=1.028$
Within Groups	65	300.8852	4.6290	
Difference	3	14.2709	4.7570	

As an obtained F score of 1.028 is not significant at the .05 level, it may be assumed that there is no significant difference in the ability of the control and experimental classes to transfer their knowledge of punctuation to transcription from shorthand notes.

The adjusted means in Table 12 provide the following answers: (1) The control class of one instructor did not achieve adjusted mean

values which were significantly higher than those of the other instructor's control class. (2) There was no significant difference in achievement between the two instructors' programmed classes. (3) There was no significant difference in achievement between each instructor's experimental and control classes.

TABLE 12

TABLE OF THE ADJUSTED MEANS RESULTING FROM ANALYSIS OF
COVARIANCE OF THE MAILABLE COPY TEST

Treatment	Instructor	Treatment Mean	Adjusted Mean
C	B	47.1200	46.9893
E	B	47.5385	47.5282
C	A	48.7333	48.1958
E	A	46.5238	47.0697

Evaluation by Instructors

Both instructors stated that the use of the programmed material was worthwhile because they did not have to use class time to review the punctuation marks. Moreover, the results of teacher-made punctuation tests and the weekly mailable copy transcripts revealed that students in the programmed classes were able to apply their knowledge of punctuation as well as those students who had been given a conventional review. The only criticism offered by the instructors was that the hyphen was not included in the programmed material.

Evaluation by Students

Following are typical comments made by students on their answer sheets before they submitted them at the end of the quarter:

I think this is an excellent way to review punctuation as it gets rather tiresome to sit through class time on the subject about the fourth time around, particularly when you were aware of proper punctuation rules in the first place. It allowed me to spend double time on the places where I needed extra help.

Although it is very helpful, I feel it is much too general. Many of the problems actually encountered are far beyond the scope of this program.

I think a lot of this material was very easy. But it was good review and I did learn from it.

Very good review. Much more interesting to review than the reference manual rules. Might be more beneficial, however, if we were tested over the material. Perhaps we would learn it better and retain it longer.

This program was very helpful to me. It is a very good idea to give these to shorthand classes because punctuation is one of the most important things in transcription.

Very helpful for punctuation review. Very helpful that we were able to see our mistakes right after we made them. Some directions were not too clear and some review frames were not too clear. Well worth the time spent. Also like the idea that we can work at our own speed.

Very helpful in reviewing punctuation usages. Easy to understand; reviewed main points and problem areas of punctuation.

Very good aid to well-reinforced learning of the subject.

I feel this method of punctuation review is very good. It provides the student with immediate results of his answers. In this way a student finds out whether she is right or wrong while the problem or question is still in her mind.

Summary

Covariance analysis reveals that the groups using programmed instruction were able to punctuate printed matter and transcripts as well as the groups which reviewed by a conventional method.

On the New Purdue Placement Test, Instructor B's programmed class performed significantly better than did his control class. Despite the fact that this test and the Cooperative English Test contained the same kinds of punctuation marks, the New Purdue Test may have been more difficult than the other test. This situation could have created a significant difference between Instructor B's control and experimental classes. He might not have reviewed punctuation as intensively in his control class as did Instructor A. The significant difference between Instructor B's programmed and control classes could also have been due to either an error or the researcher's failure to consider some unique but balancing variable.

Both instructors appreciated the time saved when programmed instruction was used and thought that the students who used it were able to punctuate as well as the students in the control groups.

The students were in favor of the programmed instruction method, as revealed by the comments they wrote on the answer sheets at the end of the quarter.

Efficiency of Programmed Material

Three comparisons were made to test the second hypothesis; review of punctuation by means of programmed instruction will be significantly

more efficient than the conventional methods of review used during the transcription course.

Time Used by Instructors

Table 13 compares the time devoted by the instructors to punctuation review in the control and experimental groups. Each instructor maintained a record of the time used to review punctuation during the control classes. During the experimental classes the instructors had volunteered to clarify or explain the frames when necessary; however, each instructor stated that he used no more than 10 minutes for this purpose during the entire quarter.

TABLE 13

COMPARISON OF TIME USED BY INSTRUCTORS TO REVIEW
PUNCTUATION IN THE CONTROL AND
EXPERIMENTAL GROUPS

Treatment	Instructor	Minutes of Review	Quarter
C	B	150	W/66
E	B	10	S/66
C	A	240	W/66
E	A	10	S/66

Although these figures do not lend themselves to statistical analysis, it is apparent that the instructors were required to spend significantly less time reviewing punctuation during the transcription

course when programmed material was used than when a conventional method of review was followed.

Time Used by Students

A comparison of the time that students in the control and experimental classes devoted to reviewing punctuation is presented in Table 14. This analysis assumes that the students in the experimental group kept accurate records of the time that they spent in studying the programmed material and that the students in the control group spent no time outside of class in reviewing punctuation. In the case of the control classes, this means that the mean review time spent by students is assumed to be the number of minutes that the instructor of the class reported that he devoted to review of punctuation in class.

TABLE 14
COMPARISON OF TIME USED BY STUDENTS IN THE
CONTROL AND EXPERIMENTAL GROUPS
TO REVIEW PUNCTUATION

Treatment	Instructor	Mean Review Time	Standard Deviation
C	B	150	
E	B	141	19.41
C	A	240	
E	A	170	40.54

The mean time used by the students in Instructor B's control class is very close to the mean time used by students in his experimental

class. There is, however, a substantial difference in the mean times used by the control and experimental classes taught by Instructor A. It should also be noted that Instructor A used a great deal more time to review punctuation in the control group than did Instructor B.

It can be observed that the standard deviation scores for the experimental groups are significantly different. Instructor A's experimental class has a higher standard deviation score than does Instructor B's class, indicating a great deal of variability in time spent on the programmed material by the students in Instructor A's class.

Time Used to Complete Programmed Material

Because the standard deviation scores indicate a great deal of variability between the two experimental classes, a comparison was made to determine the significance of this variability. The Mann-Whitney U, Table 15, results in a z-score of 2.08; according to the table of probabilities, the probability value of this z-score is .0376 (.0188 + .0188--two tail test).³ Therefore, there is a significant difference at the .03 level in the time required by the two classes to complete the programmed material.

³Siegel, p. 247.

TABLE 15

MINUTES DEVOTED TO REVIEW OF PUNCTUATION BY MEANS OF
PROGRAMMED INSTRUCTION, SECTIONS I & II

Students Section I	Rating in Minutes	Rank	Students Section II	Rating in Minutes	Rank
1	120	6	1	100	1
2	120	6	2	110	2
3	130	8	3	112	3
4	145	15	4	117	4
5	150	20	5	120	6
6	150	20	6	135	9.5
7	155	23.5	7	135	9.5
8	165	27.5	8	137	11
9	180	29.5	9	140	12.5
10	210	31.5	10	140	12.5
11	210	31.5	11	145	15
12	240	33.5	12	145	15
13	240	<u>33.5</u>	13	147	17
		285.5=	14	150	20
		R ₁	15	150	20
			16	150	20
			17	155	23.5
			18	160	25.5
			19	160	25.5
			20	165	27.5
			21	180	<u>29.5</u>
					309.5=
					R ₂

$$*U = 78.5$$

$$*z\text{-score} = 2.09$$

(uncorrected for ties)

$$*Sum\ of\ ties = 14.40$$

$$z\text{-score} = 2.08$$

(corrected for ties)

$$Probability = .0188 + .0188\ or\ .0376$$

*Formulae in Appendix C

The following statements summarize the findings pertaining to the efficiency of programmed instruction:

1. The instructors spent significantly less time reviewing punctuation during the transcription class when programmed material was used than when a conventional method of review was followed.
2. Students using the programmed material spent less time in reviewing punctuation than did the students who were reviewed in the classroom by a conventional method.
3. The two experimental classes differed significantly in amount of time spent in reviewing punctuation through use of the programmed material.

Summary

Programmed instruction was as effective as a conventional method in reviewing punctuation in transcription classes and required significantly less class time.

Both instructors appreciated having the additional class time for transcription practice when programmed instruction was used.

The students were favorable in their attitude toward the value of the programmed review.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

This study was undertaken in an effort to contribute to better teaching and learning in transcription classes. Greater achievement in the transcription classroom should ultimately be reflected in greater productivity in the business office.

Through a research design involving use of experimental and control classes, the researcher sought to determine whether use of programmed material in reviewing one particular area of related learnings, punctuation, would be significantly more effective and efficient than use of conventional methods.

The problem of the investigation was to test the following hypotheses regarding one area of related learnings--punctuation: (1) Review of punctuation by means of programmed instruction will be significantly more effective than the conventional methods of review used during the transcription course. (2) Review of punctuation by means of programmed instruction will be significantly more efficient than the conventional methods of review used during the transcription course.

Specifically, the problem was analyzed through seeking answers to the following questions: (1) Were the four classes involved in the

experiment comparable with respect to mental ability, verbal ability, and knowledge of the subject matter? (2) Did classes using the programmed material do significantly better on punctuating printed matter than the control classes? (3) Did classes using the programmed material do significantly better on transferring their knowledge of punctuation to transcription from shorthand notes than the control classes? (4) In the control classes, did one instructor produce results significantly better than the other? (5) In the experimental classes using programmed instruction, were the results obtained by one instructor significantly better than those obtained by the other instructor? (6) Did the programmed classes for each instructor do significantly better than his control classes? (7) Were each instructor's programmed classes significantly more efficient than his control classes?

Two instructors took part in the experiment. Each had a control class during the winter quarter and an experimental class during the spring quarter.

The seventy-four students involved in this study were enrolled in ST 12 (second quarter of advanced shorthand) at Colorado State University during either the winter or spring quarter of 1966. All had completed the previous shorthand course at Colorado State University. Two classes were available during each quarter. Students were assigned to classes through the college registration procedure, with no effort to guide them into one class or the other for the purpose of this experiment. Insofar as the experiment was concerned, the composition of classes during each quarter was a matter of chance, the choice of

each student being restricted only by other college requirements not related to the experiment.

The review material was controlled in that the researcher provided illustrative sentences for the use of instructors of the control group and included these same sentences in the booklet of programmed material. The control group instructors were permitted to use additional sentences of their choice to supplement the illustrative sentences provided by the researcher. Both instructors reported that they did not need to use any additional sentences as a sufficient number of sentences demonstrating the uses of each punctuation mark had been provided. The researcher, however, did not include any sentences illustrating the hyphen in either the illustrative material or the programmed booklet; therefore, both instructors used sentences from other sources to review this mark of punctuation in their control and experimental classes.

The investigator prepared 69 frames of the 396-frame programmed booklet and presented them to a programming specialist in the area of English for review and criticism. His suggestions and comments were taken into consideration in the revision of the 69 frames and the construction of the remaining frames. All frames were also reviewed by two transcription instructors and revised before being presented to three students for review and comments. After each student had reviewed the frames, they were again revised.

The standardized pretests were administered to the control and experimental groups during the second week of the winter and spring quarters, respectively. The posttests were administered to the control

group during the last week of the winter quarter. In the experimental group, however, these tests were given when the group finished the programmed booklet. As both experimental classes completed the booklet during the seventh week of the spring quarter, they took the posttests during the eighth week.

It so happened that the eighth week of the winter quarter was the last full week of that quarter; therefore, both the control and experimental groups actually took their posttests during the same week of the winter and spring quarters, respectively.

Instructors participating in this experiment kept a record of the time required to review punctuation in the control classes. In the experimental classes, they recorded the time needed to clarify or explain certain frames. The students used the programmed booklets outside of class and recorded the amount of time in minutes required to complete each assignment.

After the tests were given, they were scored by the investigator and double-checked by a student assistant. Each student's score was then recorded on his data card. The CEEB scores, class grades, and minutes required to complete the program were also recorded on these data cards, thereby providing the information needed for the machine computations of variance, covariance, and the Mann-Whitney U.

The analysis of variance revealed that there was some difference in the mental ability, verbal ability, and knowledge of subject matter possessed by the groups involved in the experiment but that this difference was not significant at the .05 level. To control for these minor differences, however, and to give consideration to the

other dependent variables, the data were subjected to the analysis of covariance.

Analysis of the data by covariance indicated that the first hypothesis, stating that review of punctuation by means of programmed instruction would be significantly more effective than the conventional methods of review used during the transcription course, had to be rejected insofar as the Cooperative English Test and the mailable copy test were concerned; there was no significant difference between the control and experimental groups at the .05 level of significance. Regarding the New Purdue Placement Test, however, the data indicated that this hypothesis could be accepted, as the experimental group did significantly better than the control group, measured at the .05 level of significance.

The adjusted means resulting from the analysis of covariance of the New Purdue Placement Test reveal the factors which were responsible for developing a significant difference among the classes: (1) The adjusted mean of Instructor A's control class was at least four points higher than that of Instructor B's control class. (2) The adjusted mean of Instructor B's programmed class was at least three points higher than that of his control class.

As there was less than one point difference in the adjusted means of Instructor A's and Instructor B's programmed classes on the New Purdue Placement Test, it may be assumed that the students in both programmed classes achieved at about the same level and that this difference was insignificant.

The second hypothesis, stating that review of punctuation by means of programmed instruction would be significantly more efficient than the conventional methods of review used during the transcription course, may be accepted. In the control classes, taught during the winter quarter, Instructor A used 240 minutes of class time and Instructor B used 150 minutes of class time in reviewing punctuation by conventional methods. However, in the spring quarter classes using the programmed material, each instructor spent no more than ten minutes of class time on punctuation review, or a total of twenty minutes for both classes during the entire quarter.

The time required by the students to complete the programmed material ranged from 100 minutes to 240 minutes, the range being the greater in Instructor A's class, which was the larger of the two.

The difference in time used by the two programmed classes to complete the programmed material was significant at the .03 level, Instructor B's class using considerably less time for review.

Conclusions

It may be concluded from this study that students using programmed material to review punctuation in transcription classes can punctuate printed matter and transcripts as well as students who are subjected to a conventional method of review.

It may also be concluded that programmed review of punctuation is more efficient than a conventional method of review because the programmed method can be utilized outside of class, thereby providing additional class time for practice in the transcription process.

Implications

Because of the small sample and because of its local nature, statistical inference on the basis of the results is not warranted. However, this situation does not preclude logical inferences related to local groups similar to the samples used in this experiment.

The analysis of covariance revealed no significant difference among the groups in ability to punctuate printed matter insofar as the Cooperative English Test was concerned; the experimental group performed significantly better than did the control group on the New Purdue Placement Test, which also tested their ability to punctuate printed matter. Because both the Cooperative English Test and the New Purdue Placement Test are standardized instruments constructed to test the ability of students to punctuate printed matter, one would assume that the test results would be similar for both the programmed and control classes; however, the group using the programmed material performed significantly better on the New Purdue Test than did the control group. The difference in performance on the two tests might be attributed to error, or chance, to difficulty level, to a variable which was not considered, or to some other undetermined factor.

On the New Purdue Placement Test, the programmed class of one instructor performed significantly better than did his control class in which he had used considerably less time to review punctuation than did the other instructor. Moreover, both classes using the programmed material achieved about equally well. These facts might indicate that programmed instruction provides as good a review as the classroom instructor who reviews punctuation intensively, but it provides

a better review than the instructor who does not review intensively.

As programmed review is as effective as the conventional review methods in training students to punctuate printed matter and transcripts and significantly more efficient than the conventional methods, it could be used in the other two advanced shorthand classes at Colorado State University, thereby allowing more time for the pursuit of the primary goal of each class.

It is possible that programmed instruction of punctuation review could be used effectively in business communications classes, in which such review is necessary but time-consuming.

Recommendations

There is need for further experimentation with the methods and materials employed in the present study. It is recommended (1) that these methods and materials be used in a study involving both beginning and advanced shorthand classes at more than one college; (2) that these methods and materials be used in a study involving both beginning and advanced shorthand classes at more than one high school; (3) that the programmed material and printed criterion tests be used in a study involving business communications classes in more than one college; (4) that other areas of the related learnings, such as word usage, be programmed and tested for their applicability to the transcription process in both beginning and advanced shorthand classes.

By constant, diligent research in the area of transcription, and specifically related learnings, transcription courses can be improved and directed toward their primary goal: transcription of mailable copy.

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APPENDIX A

TESTS USED IN THE EXPERIMENT

COOPERATIVE ENGLISH TEST (Form T--Pretest)

Page A5

Part II

Time: 15 minutes

Directions: In the passages below, at each place where there is a number below the line of text, decide what punctuation, if any, is needed there. At the right of that line, in the group numbered to correspond to the place in the text, locate the punctuation you consider correct for that place. ("N" means "no punctuation.") Write the number of the correct choice in the parentheses at the right, as in the sample.

Sample:

	8-1	N	
We came home	8-2	,	
8	8-3	;	___ 8 (1)
yesterday	9-1	N	
9	9-2	.	
	9-3	?	___ 9 (2)

In the sample, at the place in the sentence marked 8, no punctuation is required. "N," meaning "no punctuation," is choice 1; so you would write 1 in the parentheses, as shown above. At the place marked 9, a period is needed. The period is choice 2; so you would write 2 in the parentheses.

An experiment in the growing	1-1	N	
	1-2	,	
of the guayule plant which may	1-3	;	___ 1 ()
1	2-1	N	
eventually prove to be a very	2-2	,	___ 2 ()
2	3-1	N	
important source of rubber is	3-2	,	___ 3 ()
3	4-1	N	
being conducted at Salinas	4-2	,	
5	4-3	;	___ 4 ()
California.	5-1	N	
	5-2	,	___ 5 ()

* * * * *

A number of trucks will today	6-1	N	
	6-2	n's	
begin moving 750 tons of equipment	6-3	ns'	___ 6 ()
6			

and office records of the Employees	7-1	N	
Compensation Commission from Washing-	7-2	t's	
ton to its new headquarters in New	7-3	ts'	___7 ()
7	8-1	N	
York. This agency which is the third	8-2	,	___8 ()
8	9-1	N	
9	9-2	,	___9 ()
large government bureau to be moved	10-1	N	
out of Washington to provide more space	10-2	r's	
for essential workers in the nations	10-3	rs'	___10 ()
10	11-1	N	
11	11-2	n's	
capital will bring 500 employees. Al-	11-3	ns'	___11 ()
12	12-1	N	
though the moving of the equipment is	12-2	,	___12 ()
scheduled for completion this week	13-1	N	
13	13-2	,	___13 ()
14	14-1	N	
the employes will not begin work here	14-2	,	
until next week for it is realized	14-3	;	___14 ()
15	15-1	N	
16	15-2	,	
that they will need some time to get	15-3	;	___15 ()
settled.	16-1	N	
	16-2	,	
	16-3	;	___16 ()

* * * * *

Theres a short cut	17-1	N	
17	17-2	"	___17 ()
18	18-1	N	
	18-2	e's	
	18-3	es'	___18 ()
you can take Mrs. Adams	19-1	,	
19	19-2	.	
	19-3	,"	
	19-4	."	___19 ()

replied if you turn off the
20

main highway just beyond the

church but I dont think
21 22

its a very good road
23 24

20-1 ,
20-2 .
20-3 ,"
20-4 ." ____ 20 ()

21-1 N
21-2 ,
21-3 ; ____ 21 ()

22-1 N
22-2 n't
22-3 nt' ____ 22 ()

23-1 N
23-2 t's
23-3 ts' ____ 23 ()

24-1 N
24-2 .
24-3 ." ____ 24 ()

* * * * *

Thursday night February 16 the
25 26

first total eclipse of the moon for this
year will occur. Astronomers from the
Hayden Planetarium members of the
27

Amateur Astronomers Association and
28

several other groups have established
29

an observation post near Westbury.

* * * * *

She stopped by the side of
the car and turned to her com-

panion I am afraid that I cant
30 31

25-1 N
25-2 , ____ 25 ()

26-1 N
26-2 , ____ 26 ()

27-1 N
27-2 , ____ 27 ()

28-1 N
28-2 , ____ 28 ()

29-1 N
29-2 , ____ 29 ()

30-1 N
30-2 ,
30-3 .
30-4 ,"
30-5 ." ____ 30 ()

31-1 N
31-2 n't
31-3 nt' ____ 31 ()

offer to give you a lift 32	32-1 N 32-2 , 32-3 . ___ 32 ()
Henry she said I have 33 34	33-1 , 33-2 . 33-3 ," 33-4 ." ___ 33 ()
to stop at my mothers house 35	34-1 , 34-2 . 34-3 ," 34-4 ." ___ 34 ()
and its likely that she will 36	35-1 N 35-2 r's 35-3 rs' ___ 35 ()
want me to stay for a while 37	36-1 N 36-2 t's 36-3 ts' ___ 36 ()
	37-1 N 37-2 . 37-3 ." ___ 37 ()
* * * * *	
March is the month for de- 38	38-1 N 38-2 , 38-3 ; ___ 38 ()
ciding if one is ever to decide 39 40	39-1 N 39-2 , ___ 39 ()
whether or not to have a vegetable garden. Of course only the laggard waits until this season any gar- 41	40-1 N 40-2 , ___ 40 () 41-1 N 41-2 , 41-3 ; ___ 41 ()
dener who is a real enthusiast 42 43	42-1 N 42-2 , ___ 42 ()
always starts planning his crops for next year before this years harvest 44 45	43-1 N 43-2 , ___ 43 () 44-1 N 44-2 r's 44-3 rs' ___ 44 ()
is on the table.	45-1 N 45-2 , ___ 45 ()

COOPERATIVE ENGLISH TEST (Form T--Pretest)

Answer Sheet

1-1 N	14-1 N
1-2 ,	14-2 ,
1-3 ; ___ 1 (2)	14-3 ; ___ 14 (2)
2-1 N	15-1 N
2-2 , ___ 2 (1)	15-2 ,
3-1 N	15-3 ; ___ 15 (3)
3-2 , ___ 3 (1)	16-1 N
4-1 N	16-2 ,
4-2 ,	16-3 ; ___ 16 (1)
4-3 ; ___ 4 (2)	17-1 N
5-1 N	17-2 " ___ 17 (2)
5-2 , ___ 5 (2)	18-1 N
6-1 N	18-2 e's
6-2 n's	18-3 es' ___ 18 (2)
6-3 ns' ___ 6 (1)	19-1 ,
7-1 N	19-2 .
7-2 t's	19-3 ,"
7-3 ts' ___ 7 (1)	19-4 ." ___ 19 (3)
8-1 N	20-1 ,
8-2 , ___ 8 (2)	20-2 .
9-1 N	20-3 ,"
9-2 , ___ 9 (1)	20-4 ." ___ 20 (3)
10-1 N	21-1 N
10-2 r's	21-2 ,
10-3 rs' ___ 10 (1)	21-3 ; ___ 21 (3)
11-1 N	22-1 N
11-2 n's	22-2 n't
11-3 ns' ___ 11 (2)	22-3 nt' ___ 22 (2)
12-1 N	23-1 N
12-2 , ___ 12 (2)	23-2 t's
13-1 N	23-3 ts' ___ 23 (2)
13-2 , ___ 13 (1)	24-1 N
	24-2 .
	24-3 ." ___ 24 (3)

25-1 N
25-2 , _____ 25 (2)

26-1 N
26-2 , _____ 26 (2)

27-1 N
27-2 , _____ 27 (2)

28-1 N
28-2 , _____ 28 (2)

29-1 N
29-2 , _____ 29 (1)

30-1 N
30-2 ,
30-3 .
30-4 ,"
30-5 ." _____ 30 (5)

31-1 N
31-2 n't
31-3 nt' _____ 31 (2)

32-1 N
32-2 ,
32-3 . _____ 32 (2)

33-1 ,
33-2 .
33-3 ,"
33-4 ." _____ 33 (3)

34-1 ,
34-2 .
34-3 ,"
34-4 ." _____ 34 (4)

35-1 N
35-2 r's
35-3 rs' _____ 35 (2)

36-1 N
36-2 t's
36-3 ts' _____ 36 (2)

37-1 N
37-2 .
37-3 ." _____ 37 (3)

38-1 N
38-2 ,
38-3 ; _____ 38 (1)

39-1 N
39-2 , _____ 39 (2)

40-1 N
40-2 , _____ 40 (2)

41-1 N
41-2 ,
41-3 ; _____ 41 (3)

42-1 N
42-2 , _____ 42 (1)

43-1 N
43-2 , _____ 43 (1)

44-1 N
44-2 r's
44-3 rs' _____ 44 (2)

45-1 N
45-2 , _____ 45 (1)

COOPERATIVE ENGLISH TEST (Form T--Pretest)

Analysis of Punctuation Usages

	<u>Usage</u>	<u>Total Usage in Group</u>	<u>Grand Total</u>
<u>Quotation Marks</u>			
Beginning of sentence	1		
With period	2		
With quote	<u>2</u>		
		5	
<u>Comma</u>			
Apposition	3		
Parenthetical	4		
Series	3		
Nonrestrictive clause	6		
Restrictive clause	3		
Introductory dependent clause	2		
Adjective	3		
Direct address	<u>2</u>		
		26	
<u>Semicolon</u>			
No conjunction	1		
Because of internal punctuation	<u>2</u>		
		3	
<u>Possessives</u>			
		4	
<u>Plurals</u>			
		2	
<u>Contractions</u>			
		<u>5</u>	

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form E--Pretest)

Page 2

Part 2

Time: 11 minutes

Directions: Some of the following sentences are punctuated correctly, and some are punctuated incorrectly. If the sentence is punctuated correctly, mark "/" through the "R" (right); if the sentence is punctuated incorrectly, mark "/" through the "W" (wrong).

1. As I looked at the test questions, I had one happy thought: they were not so difficult as I had expected them to be. 1
2. O. Henry was a famous American writer of short stories. He was a master of the surprise ending. 2
3. Many college students seem not to be aware that a dictionary is an extremely useful book; although they have heard the statement made often enough. 3
4. The corn crop this year will be a failure, spring floods and summer drought having brought about bad growing conditions. 4
5. Certain people of importance dislike changing their opinions, even when they find that they are wrong about certain matters. 5
6. When we were children, we loved to visit Grandmother McHenry, who lived on a large farm in southern Wisconsin. 6
7. Mother loves to shop whenever and wherever there are bargains in womens' clothing. 7
8. I live in a small town in central Pennsylvania, the nearest railroad is twelve miles away; and therefore it is a somewhat difficult place to reach. 8
9. My most embarrassing moment--how well do I remember it!--occurred when I was eleven years old. 9
10. When you are in Chattanooga Tennessee, be sure to visit Point Park on Lookout Mountain. 10
11. Sports writers said that Kentland College had no chance to win; nevertheless, its team was victorious in a close game. . 11
12. Because he had studied faithfully and because his grades were high; his name was placed on the honor list. 12
13. Sunny mornings, sleepy afternoons, moonlit evenings, cool nights; this is the kind of weather I hope to have during my vacation. 13

14. My father is district manager for the Bell Telephone Company, many people believe that he is responsible for the excellent telephone service in our community. 14
15. Atwater University usually has granted a vacation of two weeks for the Christmas holidays; the vacation this year, however, will be shorter. 15
16. In the parking lot were cars from the following states; Vermont, Rhode Island, Ohio, Kentucky, and Iowa. 16
17. Julia's father and her two brothers were spending a two week's vacation at the lake. 17
18. The members of the Jones family had lived beyond their income, and they were, therefore, unable to take a vacation. .. 18
19. Any game, which puts a severe strain on the heart, should be avoided as a menace to health. 19
20. On my birthday, September 1, 1954, our family moved from Logansport, Indiana, to Ann Arbor, Michigan. 20
21. In the autumn my favorite sport is golf; in the winter my physical activity is limited to an occasional game of handball. 21
22. Moreover, was it worth while, do you think, to spend so much time and to receive so little in return? 22
23. Greencastle, my home town, is located in central Indiana; about forty miles west of the state capital. 23
24. Snow, sleet, rain, hail, and sunshine--never before was such a strange mixture of weather seen in our locality. 24
25. His supply of money was soon exhausted; hence he was forced to leave school and go to work. 25
26. The air lines canceled all flights over the Caribbean Sea; because weather forecasters predicted hurricanes throughout the area. 26
27. The firemen having worked strenuously for several hours, the fire was at last brought under control. 27
28. The last car I bought had some of the very latest improvements. Moreover, it was the lowest-priced car of its kind on the market. 28
29. "There is no use in starting too soon," said Father; "in fact, we could wait another half hour and still have plenty of time." 29

30. John Robbins--everybody in our town loves John Robbins, was the favorite adult of four generations of children. 30
31. Mary felt that she should not have taken a job so far away from home; besides, her mother was in poor health and needed her. 31
32. During my freshman year I had four classes a day. Each recitation period being fifty minutes in length. 32
33. Please let us know your plans several days in advance; otherwise we may not be able to go with you. 33
34. In our city the only building which is fifteen stories high is the Chamber of Commerce Building. 34
35. Some students take little interest in good books and magazines. The belief being that such reading is not practical. 35
36. Abraham Lincoln frequently walked miles to borrow books from a friends library. 36
37. The silk moth passes through the following stages; egg, larva, chrysalis, and adult. 37
38. "Will you be at the game?" asked Henry, "every one in the Booster Club is supposed to be there." 38
39. Neither team was able to score and the game ended in a tie; this result upset all the advance statements of the sports writers. 39
40. He did not plan to go home at Thanksgiving, moreover, he had no money with which to pay for the trip. 40
41. John's argument was perfectly logical and should have convinced anyone of open mind, however, too many people are too fond of their own opinions to be convinced by argument. 41
42. When I left high school, I said, that those four years were the most enjoyable of my life. 42
43. The Roosevelt, who was elected President of the United States in 1932, was not the Roosevelt who formed the Bull Moose Party. 43
44. You would never guess for whom the city of Lincoln, Nebraska, was named. 44
45. I am going to the library for the books which I need have been reserved in my name. 45

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form E--Pretest)

Answer Sheet

- | | |
|--------------|--------------|
| 1. R W | 24. R W |
| 2. R W | 25. R W |
| 3. R W | 26. R W |
| 4. R W | 27. R W |
| 5. R W | 28. R W |
| 6. R W | 29. R W |
| 7. R W | 30. R W |
| 8. R W | 31. R W |
| 9. R W | 32. R W |
| 10. R W | 33. R W |
| 11. R W | 34. R W |
| 12. R W | 35. R W |
| 13. R W | 36. R W |
| 14. R W | 37. R W |
| 15. R W | 38. R W |
| 16. R W | 39. R W |
| 17. R W | 40. R W |
| 18. R W | 41. R W |
| 19. R W | 42. R W |
| 20. R W | 43. R W |
| 21. R W | 44. R W |
| 22. R W | 45. R W |
| 23. R W | |

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form E--Pretest)

Analysis of Punctuation Usages

	<u>Usage</u>	<u>Total Usage in Group</u>	<u>Grand Total</u>
<u>Quotation Marks</u>			
With period	2		
With question mark	1		
With comma	1		
Split quote	<u>1</u>		
		5	
<u>Comma</u>			
Apposition	3		
Parenthetical	3		
Series	4		
Nonrestrictive clause	4		
Restrictive clause	4		
Introductory dependent clause	5		
Nonrestrictive phrase	4		
Coordinate conjunction	<u>2</u>		
		29	
<u>Semicolon</u>			
No conjunction	7		
Conjunctive adverb	7		
Because of internal punctuation	<u>2</u>		
		16	
<u>Possessives</u>		3	
<u>Colon</u>			
Before list	2		
Before explanatory sentence	<u>1</u>		
		3	
<u>Dash</u>			
Interjected element before words	2		
Summarizing a preceding state- ment	<u>1</u>		
		<u>3</u>	
			59*

*The usages total more than 45 because some sentences require knowledge of more than one usage.

PROCEDURES FOR ADMINISTERING MAILABLE COPY PRETEST-POSTTEST

Directions for Instructors:

1. Dictate (starting with the salutation) at 60 wpm. The material is marked in 20-word groups.
2. Do not dictate any punctuation marks, but do dictate paragraphs.
3. Ask students to type letters in duplicate; you can give me the original; use the carbon copy for your own purposes.
4. Give the students as much transcription time as necessary to be sure that all students complete the letters.
5. Do not allow students to retype a letter; instead ask them to make corrections by erasing their errors on the transcript.
6. Note on the original transcript of Letter No. 1 the time required to complete the three letters.

Directions for Students:

1. Type letters in duplicate, using full block with mixed punctuation.
2. Start each letter once and make corrections by erasing.
3. If you can't read your shorthand in spots, leave a blank and proceed to transcribe the letter.
4. The last letter can be placed on one page if a 6-inch line is used.

Special Instructions:

These letters will be of no value for a posttest if they are used for critique purposes, retyped for outside mailable copy, or given to the students for any purpose. Since I'd like to use them for posttests, I would appreciate your merely using them for practice mailable copy work.

Letter No. 1

Mr. John Brown; 2099 Olive Street; Omaha, Nebraska

Dear Mr. Brown:

We learned that you have accepted a teaching position at South High School. We feel certain that you will / enjoy your association with the Omaha Public School System and the people affiliated with /
1
it.

Having chosen a fine town in which to teach, you will also want
2
to choose the finest in banking institutions. (1) The Missouri Valley National Bank, your key bank, offers you complete banking services.
3 3

We are installing / an IBM data processing system, which will be
4
operational approximately the first of / October. This installation will provide our customers with the following benefits; more accurate
5
(2) handling of accounts, more rapid completion of monthly procedures,
6 6
and more effective contacts with customers. /

The Bank's officers and personnel invite you to stop in and get
7
acquainted. This efficient, rapidly / growing institution is located
8
at the junction of Dodge and Missouri Streets. Sincerely, Bob Jones,
President (3)

(149 words; 252 syllables; 1.7 difficulty index)

Note: Subordinate numbers indicate punctuation checkpoints.

January 10, 1966

Mr. John Brown
2099 Olive Street
Omaha, Nebraska

Dear Mr. Brown:

We learned that you have accepted a teaching position at South High School. We feel certain that you will enjoy your association with the Omaha Public School System and the people affiliated with it.

Having chosen a fine town in which to teach, you will also want to choose the finest in banking institutions. The Missouri Valley National Bank, your key bank, offers you complete banking services.

We are installing an IBM data processing system, which will be operational approximately the first of October. This installation will provide our customers with the following benefits: more accurate handling of accounts, more rapid completion of monthly procedures, and more effective contacts with customers.

The Bank's officers and personnel invite you to stop in and get acquainted. This efficient, rapidly growing institution is located at the intersection of Dodge and Missouri Streets.

Sincerely,

Bob Jones
President

BJ/rm .

Letter No. 2

Miss Mary Jones; 1010 Adams Street; Dallas, Texas

Dear Miss Jones:

It is with genuine pleasure that we have opened a charge account
for you, Miss Jones; moreover, we / want you to know that this proce-
9 10 11
dure means considerably more than a mere formality. Having a charge /
account has come to represent good will, and good will is a point of
12
great importance to us.

Good will, by the way, (1) simply means a natural inclination on
13 13
your part to deal with those who have pleased you. At Belmont's, where
14 15
the world / shops with confidence, we endeavor in each transaction to
15
show that we deserve such an indication of your / faith.

Our exclusive merchandise, friendly employees, and elegant ap-
16 16
pointments have been chosen with the selective (2) customer in mind;
17
and furthermore, you have every right to expect that we shall do all
18
we can to satisfy / you.

The enclosed information sheet explains the terms of your account.
Should you have any questions regarding this / explanation, please
19
call Mr. Robert Hall, who will handle your account. Sincerely yours,
20

Ed Belmont, President (3)

(169 words; 252 syllables; 1.49 difficulty index)

Note: Subordinate numbers indicate punctuation checkpoints.

January 10, 1965

Miss Mary Jones
1010 Adams Street
Dallas, Texas

Dear Miss Jones:

It is with genuine pleasure that we have opened a charge account for you, Miss Jones; moreover, we want you to know that this procedure means considerably more than a mere formality. Having a charge account has come to represent good will, and good will is a point of great importance to us.

Good will, by the way, simply means a natural inclination on your part to deal with those who have pleased you. At Belmont's, where the world shops with confidence, we endeavor in each transaction to show that we deserve such an indication of your faith.

Our exclusive merchandise, friendly employees, and elegant appointments have been chosen with the selective customer in mind; and furthermore, you have every right to expect that we shall do all we can to satisfy you.

The enclosed information sheet explains the terms of your account. Should you have any questions regarding this explanation, please call Mr. Robert Hall, your personal credit representative.

Sincerely yours,

Ed Belmont
President

EB/rm

Enclosure

Letter No. 3

Miss Mary Evans; 3056 Ocean Street; San Francisco, California

Dear Miss Evans:

How would you like a better job with more pay? If you receive
21

more pay, you know that you will be / holding a job which requires you
22

to assume more responsibility and to perform at a higher / level. Are
you willing to put forth the effort to improve yourself to obtain the
higher qualifications? (1)
23

Improving one's self is easy--inexpensive, too--with the aid of
24 25 26 25

Columbia Home-Study Courses, which are / recorded on tapes or records.
27

Now available are courses in English, history, and business. /
28 28

Testimonials from former students verify the fact that one can
study from the records or tapes at his (2) convenience for a few min-
utes each day and soon discover that he is prepared for a better job.
Miss / Sandra Adams, who was taking the shorthand dictation course,
29 29

said, "In just one month I had increased my speed twenty / words per
30 31 32

minute; I only spent a few minutes' time on the records each night."
33 34 35 36

"I became an office supervisor," (3) said Mr. Charles Smith, "after I
37 38 39 40 41

completed the office management course." Mr. Smith added, "Why don't
42 43 44 45

people realize / that with just a little effort they can improve
46 46

themselves?"

47.48

To take advantage of this opportunity for / self-improvement, Miss
49

Evans, just fill in the attached card and mail it to us. We shall send
49 50

you the course of your choice (4) immediately. Yours truly, Tom Brown,
Superintendent

P.S. A better job, professional growth, more pay--these oppor-
51 51 52

tunities are yours with the Columbia Home-Study School; enroll today
53

for a brighter tomorrow./

(255 words; 392 syllables; 1.53 difficulty index)

Note: Subordinate numbers indicate punctuation checkpoints.

January 10, 1965

Miss Mary Evans
3056 Ocean Street
San Francisco, California

Dear Miss Evans:

How would you like a better job with more pay? If you receive more pay, you know that you will be holding a job which requires you to assume more responsibility and to perform at a higher level. Are you willing to put forth the effort to improve yourself to obtain the higher qualifications?

Improving one's self is easy--inexpensive, too--with the aid of Columbia Home-Study Courses, which are recorded on tapes or records. Now available are courses in English, history, and business.

Testimonials from former students verify the fact that one can study from the records or tapes at his convenience for a few minutes each day and soon discover that he is prepared for a better job. Miss Sandra Adams, who was taking the shorthand dictation course said, "In just one month I had increased my speed twenty words per minute"; I only spent a few minutes on the records each night." "I became an office supervisor," said Mr. Charles Smith, "after I completed the office management course." Mr. Smith added, "Why don't people realize that with just a little effort they can improve themselves?"

To take advantage of this opportunity for self-improvement, Miss Evans, just fill in the attached card and mail it to us. We shall send you the course of your choice immediately.

Yours truly,

Tom Brown
Superintendent

TB/rm

P.S. A better job, professional growth, more pay--these opportunities are yours with the Columbia Home-Study School; enroll today for a brighter tomorrow.

MAILABLE COPY PRETEST-POSTTEST

Analysis of Punctuation Usages

	<u>Usage</u>	<u>Total Usage in Group</u>	<u>Grand Total</u>
<u>Quotation Marks</u>			
Beginning of sentence	2		
With period	4		
With comma	5		
Split quote	2		
With question mark	<u>2</u>		
		15	
<u>Comma</u>			
Coordinate conjunction	3		
Nonrestrictive phrase	3		
Apposition	1		
Nonrestrictive clause	5		
Series	4		
Adjective	1		
Direct address	2		
Parenthetical	4		
Introductory dependent clause	<u>2</u>		
		25	
<u>Semicolon</u>			
Conjunctive adverb	1		
No conjunction	2		
Internal punctuation	<u>1</u>		
		4	
<u>Colon</u>			
Before list		1	
<u>Possessives</u>		4	
<u>Direct Question</u>		2	
<u>Dash</u>			
Interjected element	1		
After list	<u>1</u>		
		<u>2</u>	

COOPERATIVE ENGLISH TEST (Form Y--Posttest)

Page A5

Part II

Time: 15 minutes

Directions: In the passages below, at each numbered place, you are to decide what punctuation, if any, is needed. From the group of choices having the same number, select the correct punctuation for that place. ("N" means "no punctuation.") Write the number of the correct choice in the parentheses at the right, as in the sample.

Sample:

	8-1	N	
We came home	8-2	,	
8	8-3	;	8 (1)
yesterday	9-1	N	
9	9-2	.	
	9-3	?	9 (2)

In the sample, at the place marked 8, no punctuation is required. "N," meaning "no punctuation," is choice 1; you would therefore write 1 in the parentheses, as shown above. At the place marked 9, a period is needed. The period is choice 2; you would therefore write 2 in the parentheses.

"I was born he	1-1	N	
1	1-2	.	
	1-3	,	
	1-4	."	
	1-5	,"	1 ()
replied in Topeka	2-1	N	
2	2-2	.	
3	2-3	,	
	2-4	."	
Kansas, on April 29	2-5	,"	2 ()
4			
1905 however, my	3-1	N	
5	3-2	,	3 ()
	4-1	N	
	4-2	,	4 ()
father a Methodist			
6	5-1	N	
	5-2	,	
	5-3	;	5 ()
	6-1	N	
	6-2	,	6 ()

minister was soon
7

7-1 N
7-2 , ____7 ()

transferred to a church
8

8-1 N
8-2 ,
8-3 ; ____8 ()

in Philadelphia
9

9-1 N
9-2 .
9-3 " ,
9-4 . " ____9 ()

* * * * *

The owner of the land around the lake
has put a large advertisement in the paper
10

10-1 N
10-2 .
10-3 , ____10 ()

for the season of greatest activity in
summer-resort property is just beginning.
11

11-1 N
11-2 , ____11 ()

* * * * *

They heard that a message had
12
been sent to General Washington, who
had established headquarters near
North Castle and that he was plan-
13

12-1 N
12-2 ,
12-3 ;
12-4 , " ____12 ()

ning to march north at once
14

13-1 N
13-2 ,
13-3 : ____13 ()
14-1 N
14-2 .
14-3 . " ____14 ()

* * * * *

He asked us whether the sub-
15

15-1 N
15-2 ,
15-3 ; ____15 ()

stance was animal or vegetable in its
16

16-1 N
16-2 t's
16-3 ts' ____16 ()

origin
17

17-1 N
17-2 .
17-3 ? ____17 ()

* * * * *

He is one of the best
known modern writers
18 19
being especially celebrated
for his novels.

18-1 N
18-2 , ____18 ()
19-1 N
19-2 ,
19-3 ;
19-4 : ____19 ()

* * * * *

Well young man
20 21 22

20-1 N
20-2 " ____20 ()

whats the meaning of
23

21-1 N
21-2 ,
21-3 , " ____21 ()

this inquired Jimmys
24 25

22-1 N
22-2 ,
22-3 , " ____22 ()

23-1 N
23-2 t's
23-3 ts' ____23 ()

father casting a meaningful
26

24-1 N
24-2 ,
24-3 ?
24-4 , "
24-5 ?" ____24 ()

look at the clock Didn't
27

25-1 N
25-2 y's
25-3 ys' ____25 ()

26-1 N
26-2 ,
26-3 ;
26-4 , "
26-5 ;" ____26 ()

27-1 N
27-2 .
27-3 . "
27-4 , " ____27 ()

I tell you to come home early
28

28-1 N
28-2 .
28-3 ?
28-4 ." 28 ()
28-5 ?"

* * * * *

Until recently the importation of orchids
from Mexico was forbidden even before that
29

29-1 N
29-2 ,
29-3 ; 29 ()

time, the smuggling of orchids into the

United States wasnt a very serious problem
30 31

30-1 N
30-2 'nt
30-3 n't 30 ()

for nobody ever brought back any orchids worth
the trouble. As soon as the ban on imports
was lifted, however an amateur orchid hunter
32

31-1 N
31-2 , 31 ()
32-1 N
32-2 ,
32-3 ; 32 ()

from Miami Florida, proved that great
33 34

33-1 N
33-2 , 33 ()

quantities of orchids, alive and in good
condition can be brought back from Mexico.
35

34-1 N
34-2 , 34 ()

This man is not a scientist, not even a com-
mercial orchid hunter, but just a man who
36

35-1 N
35-2 ,
35-3 ; 35 ()

loves orchids. He went into Mexico last

36-1 N
36-2 , 36 ()

month with a machete a sheath-knife, and a
37

37-1 N
37-2 , 37 ()

compass, and in five days time he had col-
38

38-1 N
38-2 y's
38-3 ys' 38 ()

lected 400 plants. Theres one that he won't
39

39-1 N
39-2 e's
39-3 es' 39 ()

be able to classify until he returns to his

books in Miami₄₀ for its shape and coloring

40-1 N
40-2 , 40 ()

are unfamiliar to him. He hopes that
its an entirely new variety.
41

Though I traveled 2600 miles,"
42

he reports I hardly scratched the
43

surface. Next year Im going to take
44

plenty of time and really look that

country over
45

41-1 N
41-2 t's
41-3 ts' _____ 41 ()

42-1 N
42-2 " _____ 42 ()

43-1 N
43-2 ,
43-3 .
43-4 ,"
43-5 ." _____ 43 ()

44-1 N
44-2 I'm
44-3 Im' _____ 44 ()

45-1 N
45-2 .
45-3 ."
45-4 ". _____ 45 ()

* * * * *

COOPERATIVE ENGLISH TEST (Form Y--Posttest)

Answer Sheet

1-1 N
 1-2 .
 1-3 ,
 1-4 ." 1 (5)
 1-5 ,"

2-1 N
 2-2 .
 2-3 ,
 2-4 ." 2 (5)
 2-5 ,"

3-1 N
 3-2 , 3 (2)

4-1 N
 4-2 , 4 (2)

5-1 N
 5-2 ,
 5-3 ; 5 (3)

6-1 N
 6-2 , 6 (2)

7-1 N
 7-2 , 7 (2)

8-1 N
 8-2 ,
 8-3 ; 8 (1)

9-1 N
 9-2 .
 9-3 " .
 9-4 ." 9 (4)

10-1 N
 10-2 .
 10-3 , 10 (3)

11-1 N
 11-2 , 11 (1)

12-1 N
 12-2 ,
 12-3 ;
 12-4 , " 12 (1)

13-1 N
 13-2 ,
 13-3 : 13 (2)

14-1 N
 14-2 .
 14-3 ." 14 (2)

15-1 N
 15-2 ,
 15-3 ; 15 (1)

16-1 N
 16-2 t's
 16-3 ts' 16 (1)

17-1 N
 17-2 .
 17-3 ? 17 (2)

18-1 N
 18-2 , 18 (1)

19-1 N
 19-2 ,
 19-3 ;
 19-4 : 19 (2)

20-1 N
 20-2 " 20 (2)

21-1 N
 21-2 ,
 21-3 , " 21 (2)

22-1 N
 22-2 ,
 22-3 , " 22 (2)

23-1 N
 23-2 t's
 23-3 ts' _____ 23 (2)

24-1 N
 24-2 ,
 24-3 ?
 24-4 ,"
 24-5 ?" _____ 24 (5)

25-1 N
 25-2 y's
 25-3 ys' _____ 25 (2)

26-1 N
 26-2 ,
 26-3 ;
 26-4 ,"
 26-5 ;" _____ 26 (2)

27-1 N
 27-2 .
 27-3 ."
 27-4 , " _____ 27 (3)

28-1 N
 28-2 .
 28-3 ?
 28-4 ."
 28-5 ?" _____ 28 (5)

29-1 N
 29-2 ,
 29-3 ; _____ 29 (3)

30-1 N
 30-2 'nt
 30-3 n't _____ 30 (3)

31-1 N
 31-2 , _____ 31 (2)

32-1 N
 32-2 ,
 32-3 ; _____ 32 (2)

33-1 N
 33-2 , _____ 33 (2)

34-1 N
 34-2 , _____ 34 (1)

35-1 N
 35-2 ,
 35-3 ; _____ 35 (2)

36-1 N
 36-2 , _____ 36 (1)

37-1 N
 37-2 , _____ 37 (2)

38-1 N
 38-2 y's
 38-3 ys' _____ 38 (3)

39-1 N
 39-2 e's
 39-3 es' _____ 39 (2)

40-1 N
 40-2 , _____ 40 (2)

41-1 N
 41-2 t's
 41-3 ts' _____ 41 (2)

42-1 N
 42-2 " _____ 42 (2)

43-1 N
 43-2 ,
 43-3 .
 43-4 ,"
 43-5 . " _____ 43 (4)

44-1 N
 44-2 I'm
 44-3 Im' _____ 44 (2)

45-1 N
 45-2 .
 45-3 ."
 45-4 " . _____ 45 (3)

COOPERATIVE ENGLISH TEST (Form Y--Posttest)

Analysis of Punctuation Usages

	<u>Usage</u>	<u>Total Usage in Group</u>	<u>Grand Total</u>
<u>Quotation Marks</u>			
Beginning of sentence	2		
With period	4		
With question mark	2		
With comma	<u>2</u>		
		10	
<u>Comma</u>			
Apposition	6		
Parenthetical	5		
Series	1		
Nonrestrictive clause	2		
Restrictive clause	2		
Adjective	2		
Conjunction	3		
Direct address	1		
Nonrestrictive phrase	<u>2</u>		
		24	
<u>Semicolon</u>			
No conjunction	1		
Conjunctive adverb	<u>1</u>		
		2	
<u>Possessives</u>		3	
<u>Contractions</u>		5	
<u>Indirect Question</u>		<u>1</u>	
			45

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form D--Posttest)

Page 2

Part 2

Time: 11 minutes

Directions: Some of the following sentences are punctuated correctly, and some are punctuated incorrectly. If the sentence is punctuated correctly, mark "/" through the "R" (right); if the sentence is punctuated incorrectly, mark "/" through the "W" (wrong).

1. I was very much disappointed in the book, although it had been highly recommended to me by my friends. 1
2. I am planning to visit some of my parents' relatives in the East this summer. 2
3. Henry made a list of the supplies he would need: ink, pencils, erasers, paper, drawing instruments, and thumbtacks. .. 3
4. A man sometimes wonders whether "gentlemens' agreements" can be trusted. 4
5. Only one edition of this newspaper is printed in the afternoon. Sometimes, indeed, we wish there were a later edition to give us additional news. 5
6. The prospects for the team this year are not bright, the failure of some of the players to return to school and the scholastic ineligibility of others being responsible for the bleak outlook. 6
7. We could tell from his manner that the man was lying, even though he insisted that he was telling the truth. 7
8. When our family planned to move to Buffalo New York, I looked forward to frequent visits to Niagara Falls. 8
9. New students are expected to arrive on the campus by September fifteenth, because there is to be a period for adjustment and registration before classes begin. 9
10. Abraham Lincoln was inaugurated--probably no one now living saw his inauguration--as President of the United States in Washington, D. C., on March 4, 1861. 10
11. Since the river was rising steadily and since there was danger that the dam would break; the people below the dam were told to flee from their homes. 11

12. For the greater part of your course, the subjects you will take are required ones; in the senior year, however, a few options are allowed. 12
13. A radio upstairs, television downstairs, movies in the basement; such are the facilities for recreation in the home of one of my friends. 13
14. This summer Joseph spent selling magazine subscriptions, several summers ago he had charge of a newspaper route in order to earn some extra money. 14
15. My parents and I are fond of travel movies, we wish that Hollywood would spend as much money on pictures of this kind as on others. 15
16. When I saw all the weeds in the garden, my first question was; how shall I ever get all this work done? 16
17. My parents are returning from Europe in August, and my sister and I are, therefore, planning to be in New York at the time they arrive. 17
18. My friend's parents are on a four month's tour around the world. 18
19. Only those roads, which lead through the park, will be closed during the hours when children are playing. 19
20. In the United States the national game is baseball; in South American countries it is association football, which we know as soccer. 20
21. Moreover, there are times, don't you think, when a man is justified in doing what under ordinary circumstances he would never think of doing? 21
22. Wilson, the most active member of the club, was again unanimously elected president; the third time this honor had been conferred upon him. 22
23. Commas, semicolons, and dashes--these are probably the most troublesome of the marks of punctuation. 23
24. The first two propositions stated are fundamentally true; hence the conclusion drawn from them is perfectly logical. .. 24
25. Two of the tires blew out on the trip West; although the manufacturer had guaranteed them for thirty thousand miles. 25
26. The coach having given his last directions to the players, the team came trotting on the field. 26

27. I have written to my friend to meet you at the airport.
Moreover, I am sure he will be greatly disappointed if you
do not plan to stay at his home. 27
28. "You will have an hour for the examination," our teacher
said; "then you will be allowed ten minutes more to re-read
your papers." 28
29. Professor Charles Brown is the adviser for the freshmen in
engineering, many students owe their success in college to
his advice. 29
30. You will find that the road over the mountain has some steep
grades; besides, there are some very sharp curves on the
other side. 30
31. Your test papers--don't forget to sign your names, will be
graded and returned to you tomorrow. 31
32. A student should not postpone his studying until the night
before the examination; if he does, he will find he has more
work on hand than he can possibly do. 32
33. A series of lectures is to be given on the functions of the
library. The belief being that students need to know more
about the facilities that the library offers. 33
34. I am sure that you will be benefited physically by a visit to
my cousins ranch. 34
35. My father who has been a candidate for office many times was
finally chosen mayor in the last election. 35
36. Books which are borrowed from a library should be treated with
great care. 36
37. The train I wished to take was over two hours late in arriv-
ing, as a result I missed my connection when I reached
Pittsburgh. 37
38. John was required to pass entrance examinations in the fol-
lowing subjects; mathematics, English, chemistry, and
history. 38
39. "I did not see John at the meeting," said Henry, "indeed, no
one was there from your family." 39
40. College is a place where one may prepare for his future; dur-
ing their college years many students also begin making
friendships that are lifelong. 40

41. A student should plan to devote a certain portion of his time to college activities, however, he should not do so at the expense of his studies. 41
42. The Washington, which I mean, is not the national capital but a city in Pennsylvania. 42
43. My grandparents have lived in Miami, Florida, for the past ten years. 43
44. Realizing that I had forgotten them, I asked John to go home for our tickets were needed to admit us to the football game. 44
45. "Come over early, Henry said to me, and we can rehearse our parts before the others arrive." 45

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form D--Posttest)

Answer Sheet

1. ~~R~~ W
2. ~~R~~ W
3. ~~R~~ W
4. R ~~W~~
5. ~~R~~ W
6. ~~R~~ W
7. ~~R~~ W
8. R ~~W~~
9. ~~R~~ W
10. ~~R~~ W
11. R ~~W~~
12. ~~R~~ W
13. R ~~W~~
14. R ~~W~~
15. R ~~W~~
16. R ~~W~~
17. ~~R~~ W
18. R ~~W~~
19. R ~~W~~
20. ~~R~~ W
21. ~~R~~ W
22. R ~~W~~
23. ~~R~~ W

24. ~~R~~ W
25. R ~~W~~
26. ~~R~~ W
27. ~~R~~ W
28. ~~R~~ W
29. R ~~W~~
30. ~~R~~ W
31. R ~~W~~
32. ~~R~~ W
33. R ~~W~~
34. R ~~W~~
35. R ~~W~~
36. ~~R~~ W
37. R ~~W~~
38. R ~~W~~
39. R ~~W~~
40. ~~R~~ W
41. R ~~W~~
42. R ~~W~~
43. ~~R~~ W
44. R ~~W~~
45. R ~~W~~

NEW PURDUE PLACEMENT TEST IN ENGLISH (Form D--Posttest)

Analysis of Punctuation Usages

	<u>Usage</u>	<u>Total Usage in Group</u>	<u>Grand Total</u>
<u>Quotation Marks</u>			
Beginning of sentence	3		
With period	3		
With comma	3		
With semicolon	<u>3</u>		
		12	
<u>Comma</u>			
Apposition	4		
Parenthetical	4		
Series	4		
Nonrestrictive clause	7		
Restrictive clause	3		
Introductory dependent clause	3		
Introductory phrase	1		
Nonrestrictive phrase	<u>4</u>		
		30	
<u>Semicolon</u>			
Conjunctive adverb	4		
No conjunction	11		
Because of internal punctuation	<u>3</u>		
		18	
<u>Possessives</u>			
		4	
<u>Colon</u>			
List		2	
<u>Dash</u>			
Interjected element	2		
Before words summarizing a preceding statement	<u>1</u>		
		<u>3</u>	
			69*

*The usages total more than 45 because some sentences require knowledge of more than one usage.

APPENDIX B

PROGRAMMED MATERIAL PREPARED FOR THE EXPERIMENT

A REVIEW OF COMMON PUNCTUATION USAGES
BY MEANS OF
PROGRAMMED INSTRUCTION

Prepared in
College of Business
Colorado State University
Fort Collins, Colorado

March, 1966

INTRODUCTION

This booklet presents a review of common punctuation usages. The method of presentation is called programmed instruction, which is a self-teaching device. Items of information are presented in a logical sequence. These items are called frames. By reading the frame, writing your answer on the answer sheet, and comparing it with the correct answer, you can determine immediately the accuracy of your answer. Your response to a frame and immediate confirmation of your response are expected to make reviewing by this method more efficient and effective than by the traditional method of review.

You will probably spend from four to six hours on this program, depending upon your background and the speed with which you work.

General Directions

Each page contains three frames. You will start with the top frame on page 1 and work through the top frames on each page to the end of the booklet. After you finish the last top frame, you will turn back to page 1 and continue on the second row of frames, etc. You will find the answers to each frame at the top of the succeeding frame. Since a program is not a test, "learning" occurs when you respond to the frame and compare your answer with the correct one. Therefore, even though the answers are available, you will gain little and lose much by looking at the answer before you respond to the frame.

Specific Instructions

1. Read each frame carefully; write your answer(s) on the answer sheet.
 - a. If the answer consists of a word or letter, write it in the blank provided on the answer sheet.
 - b. If the answer consists of a punctuation mark, write the word preceding the punctuation mark and the mark itself in the blank.

Example: I was hired for the job

Answer: job.

2. Look at the top of the next frame and check your answer with the correct answer.
 - a. If your answer is correct, proceed to the next frame.
 - b. If your answer is incorrect--return to the frame and try to decide why your answer is incorrect and the model answer is correct. Then go to the next frame.
3. Continue through the program using this same procedure.
4. Read each frame carefully before you respond to it. Care in reading and in responding to the frame will assist you in understanding the item and responding correctly.
5. Try to complete one or more sections whenever you study the program; don't stop in the middle of a section. Although you will be assigned certain portions of the program periodically, you may use as little or as much time as you need to work through the program since you will be working at your own speed.

OUTLINE OF THE PROGRAM

You will review the following common punctuation usages in this program.

- | | |
|--|---|
| <p>I. General Introduction</p> <p style="padding-left: 20px;">A. Meaning through Punctuation</p> <p style="padding-left: 20px;">B. Construction of a Sentence</p> <p>II. Period</p> <p style="padding-left: 20px;">A. Statement</p> <p style="padding-left: 20px;">B. Command</p> <p style="padding-left: 20px;">C. Courteous Request</p> <p>III. Question Mark</p> <p style="padding-left: 20px;">A. Direct Question</p> <p style="padding-left: 20px;">B. Indirect Question</p> <p style="padding-left: 20px;">C. Direct Question after Statement</p> <p style="padding-left: 20px;">D. Abbreviation in Question</p> <p>IV. Comma</p> <p style="padding-left: 20px;">A. Noun in Direct Address</p> <p style="padding-left: 20px;">B. Series</p> <p style="padding-left: 40px;">1. Words</p> <p style="padding-left: 40px;">2. Phrases</p> <p style="padding-left: 60px;">a. Prepositional</p> <p style="padding-left: 60px;">b. Infinitive</p> <p style="padding-left: 60px;">c. Participial</p> <p style="padding-left: 40px;">3. Clauses</p> <p style="padding-left: 60px;">a. Independent</p> <p style="padding-left: 60px;">b. Dependent</p> <p style="padding-left: 20px;">C. Parenthetical Expressions</p> <p style="padding-left: 40px;">1. Word</p> <p style="padding-left: 40px;">2. Phrase</p> <p style="padding-left: 40px;">3. Clause</p> <p style="padding-left: 20px;">D. Appositive</p> <p style="padding-left: 40px;">1. Word</p> <p style="padding-left: 40px;">2. Phrase</p> <p style="padding-left: 40px;">3. Dependent Clause</p> <p style="padding-left: 20px;">E. Introductory Elements</p> <p style="padding-left: 40px;">1. Phrases</p> <p style="padding-left: 60px;">a. Prepositional</p> <p style="padding-left: 60px;">b. Infinitive</p> <p style="padding-left: 60px;">c. Participial</p> <p style="padding-left: 60px;">d. Gerundial</p> <p style="padding-left: 20px;">F. Adjective</p> <p style="padding-left: 20px;">G. Compound Sentence</p> | <p>V. Semicolon</p> <p style="padding-left: 20px;">A. No Conjunction</p> <p style="padding-left: 20px;">B. Internal Punctuation</p> <p style="padding-left: 20px;">C. Conjunctive Adverb</p> <p style="padding-left: 20px;">D. Lists</p> <p style="padding-left: 20px;">E. Series with Commas</p> <p>VI. Colon</p> <p style="padding-left: 20px;">A. List</p> <p style="padding-left: 20px;">B. Explanation</p> <p>VII. Quotation Marks</p> <p style="padding-left: 20px;">A. Direct Quotation</p> <p style="padding-left: 40px;">1. With Period</p> <p style="padding-left: 40px;">2. With Comma</p> <p style="padding-left: 40px;">3. With Question Mark</p> <p style="padding-left: 40px;">4. Split Quote</p> <p style="padding-left: 40px;">5. With Semicolon</p> <p style="padding-left: 40px;">6. With Exclamation</p> <p style="padding-left: 20px;">B. Titles</p> <p style="padding-left: 20px;">C. Emphasized Words</p> <p style="padding-left: 20px;">D. With Colon</p> <p>VIII. Dash</p> <p style="padding-left: 20px;">A. Afterthought</p> <p style="padding-left: 20px;">B. Before <u>These</u> and <u>All</u></p> <p>IX. Apostrophe</p> <p style="padding-left: 20px;">A. Contractions</p> <p style="padding-left: 20px;">B. Possessives</p> <p style="padding-left: 40px;">1. Ponouns</p> <p style="padding-left: 40px;">2. Adjectives</p> |
|--|---|

PREVIEW

Frames 1-22 concern

- a. conveying accurate meaning through proper punctuation.
- b. distinguishing between sentences and fragments.

132. understand, course,

133

Punctuate:

Letters must be without obvious errors to be mailable as a rule.

264. one, Jim, (or) one-- Jim--

265

When items in a series are separated by commas, use a semicolon to separate the related items.

Punctuate:

The company has branch offices in Seattle, Washington Helena, Montana
San Antonio, Texas and Reno, Nevada.

Punctuation is a mechanical technique used to make the meaning of the sentence clear so that it can be read and understood more easily.

Without accurate punctuation, the sentence cannot be read easily because it does not have a clear _____.

133. Mailable,

134

When a noun can be specifically identified, the word, phrase, or clause which provides further information is in apposition. The words in apposition are separated from the rest of the sentence by commas.

Read:

Mr. Jones, the treasurer, is retiring soon.

A person's name specifically identifies him. The words "the treasurer" merely give further information. Therefore, they are _____ with "Mr. Jones."

265. Washington; Montana; Texas;

266

Punctuate:

The organizational chart showed as president, Mr. Adams as vice-president in charge of sales, Mr. Young and as treasurer, Mr. Brown.

2. meaning

3

Read aloud:

- a. As soon as the employer left the secretary made a personal call.
- b. As soon as the employer left, the secretary made a personal call.

The sentence which can be read more easily is (a/b) _____.

In that sentence the reader immediately understands the _____.

134. in apposition

135

Since the name of a city completely identifies the city, the state in which that city is located is separated by commas from the rest of the sentence.

Punctuate:

The branch manager is leaving for El Paso Texas tomorrow.

266. Adams; Young;

267

Punctuate the following sentences:

- a. I disagree with your decision that is, I believe that employable characteristics as well as job performance should be evaluated.
- b. Executive development programs are held each summer at Indiana University, Bloomington, Indiana Colorado University, Boulder, Colorado and the University of Illinois, Urbana, Illinois.
- c. The management process includes four functions e.g., planning, organizing, motivating, and controlling.

If you punctuated the above sentences correctly, go to frame 272.

If not, use frames 268-271 for practice.

3. b meaning

4

Punctuation often changes the emphasis in a sentence.

Compare sentences a and b:

a. All the employees I know are honest.

b. All the employees, I know, are honest.

In which sentence is the speaker saying that only the employees he knows are honest? (a/b) ____.

135. El Paso, Texas,

136

The name of a day in the week specifically identifies that day; therefore, the date is in apposition and is separated from the rest of the sentence by commas.

Punctuate:

The meeting will be on Monday January 30.

267. a. decision; b. Indiana; Colorado; c. functions;

268

Punctuate:

You must consider many factors when you are looking for a job for instance, salary, promotion procedures, location, stability of the company, and fringe benefits.

4. a

5

We must punctuate a sentence accurately so that the reader will emphasize the proper words and obtain the correct _____.

136. Monday,

137

You know that a name specifically identifies someone; therefore, the abbreviation representing a title of honor (Ph. D.) or heredity (jr.) is in apposition with the name. It is separated by commas from the rest of the sentence.

Punctuate:

Raymond A. Cameron Ph. D. will give a lecture to all business administration students.

268. job;

269

Punctuate:

Branches were established at Seattle, Washington Billings, Montana and Boise, Idaho.

 5. meaning

6

X Normally a sentence has the following characteristics:

- a. Subject (S) -- (written or understood)
- b. Verb (V) -- (for that subject)
- c. Complete Thought -- (the sentence makes sense)

Read: The file is on the desk.

S V

The statement is a sentence because it has the necessary characteristics: subject, verb, and _____.

 137. Cameron, Ph. D.,

138

The words "such as..." indicate examples of a noun already identified and begin an element in apposition. Therefore, that entire element is separated from the rest of the sentence by a comma.

Punctuate:

A secretary's job includes some receptionist duties such as answering the phone and greeting callers.

 269. Washington; Montana;

270

Punctuate:

An applicant must be aware of the many sources of jobs e.g., classified advertisements, employment agencies, and trade publications.

6. complete thought

7

Read:

I misplaced the file.

The statement is a sentence because it has a S _____, V _____,
and a C _____ T _____.

138. duties,

139

Punctuate the following sentences:

- a. Joseph Brown jr. is retained by the company as a legal representative.
- b. The new branch office will be opened in Omaha Nebraska in June.
- c. Mr. Adams the secretary attends all board meetings.
- d. A business student should have at least 50 per cent of his credits in general education courses such as literature.

If you punctuated all the above sentences correctly, go to frame 145.
If not, use frames 140-144 for practice.

270. jobs;

271

Punctuate:

The Federal Civil Service Examination is being given for several positions namely, clerk-typist, clerk-stenographer, and stenographer.

7. subject verb complete thought

8

Read:

Who lost the lock?

The question is a sentence because it has the necessary characteristics:

a. _____

b. _____

c. _____

139. a. Brown, jr., b. Omaha, Nebraska,
c. Adams, secretary, d. courses,

140

Punctuate:

We shall move to new offices on January 1 1968.

271. positions;

272

PREVIEW

Frames 273-288 illustrate the following uses of the colon:

- a. following ~~a complete statement~~ and preceding a list.
 - b. following a statement which implies that a list follows it.
 - c. before a complete sentence which explains the preceding sentence.
-

8. subject verb complete thought

9

The word you is the understood subject of a command.

Read:

(You) Close the door.

The command has all the characteristics for a sentence. (yes/no)_____

140. January 1,

141

Punctuate:

Adam Doe sr. is the new president of the Little Steel Company.

273

A colon follows a complete statement which precedes a list.

Punctuate:

The following items were requisitioned paper clips, letterhead, and carbon paper.

9. yes

10

If a group of words lacks one or more of the characteristics which describe a sentence, it is a fragment, or part of a sentence.

Read:

The girl walking to the file cabinet.

The word "walking" is not used as a verb; it describes "girl" and is used as an adjective. Therefore, this group of words has no verb and is a _____.

141. Doe, sr.,

142

Punctuate:

A branch office was established in Denver Colorado recently.

273. requisitioned:

274

h The statement preceding a list often contains such words as the following, as follows, these, and thus, which are clues to the punctuation expected.

Punctuate:

The officers are as follows Tom Jones, president; Mary Smith, secretary; and Adam Doe, treasurer.

10. fragment

11

Read:

The girl walking to the file cabinet came from the San Francisco branch.

The addition of "came from San Francisco branch" provides a verb and makes the group of words a (sentence/fragment) _____.

142. Denver, Colorado,

143

Punctuate:

Mr. Evans the new manager came here from San Antonio.

274. follows:

275

✓
Punctuate:

The applicant listed the following courses as pertinent to the job shorthand, typing, and English.

 11. sentence

12

Read:

The bookkeeper having been told by the manager to check the invoice.

The words "having been told" do not compose a verb; instead, they describe "bookkeeper" and introduce a phrase used as an adjective. Therefore, this group of words has no verb and is a _____.

 143. Evans, manager,

144

Punctuate:

A high school teacher has many responsibilities such as sponsoring extra-curricular activities.

 275. job:

276

If the statement introducing a list implies instead of states that a list follows, the colon is still used.

Punctuate:

Many items were placed on requisition paper clips, pencils, pens, carbon paper, and staples.

 12. fragment

13

The bookkeeper having been told by the manager to check the invoice found a mistake.

The addition of "found a mistake" provides a verb and makes the group of words a _____.

 144. responsibilities,

145

The title of a publication is treated as a single word and is in apposition with the noun it further explains. If the publication is specifically identified without the title, commas separate the title from the rest of the sentence.

Read:

John Smith's book, "The Business Enterprise," is now off the press.

The author's name specifically identifies the book; so commas are used to s _ _ _ _ _ e the name of the book from the rest of the sentence.

 276. requisition:

277

Punctuate:

The class meets four times each week Monday, Tuesday, Wednesday, and Friday.

 13. sentence

14

Read:

If you agree to the terms of the contract as written by Mr. Adams.
 S V

This group of words has a subject and verb but does not present a complete thought; therefore, it is a _____.

 145. separate

146

If the publication needs the title to identify it further, then the title is not separated from the rest of the sentence.

Read:

Many office managers subscribe to the magazine Administrative Management.

"Magazine" does not fully identify the publication; therefore, the title of the magazine (is separated, is not separated) _____ from the rest of the sentence by a comma.

 277. week:

278

If a list is preceded by a verb, a colon is not used before the list because it would separate the verb from its objects or the predicate nominatives (words which rename the subject.)

Punctuate:

We need typewriters, adding machines, and duplicators for the new
 V
 office.

14. fragment

15

Read:

If you agree to the terms of the contract as written by Mr. Adams,
please sign and return it before March 15.

The addition of "please sign and return it before March 15" provides a complete thought; this group of words is now a _____.

146. is not separated

147

Often a word is used which seems to explain the noun by which it stands and to be in apposition with it; yet that word is not separated from the rest of the sentence by commas because it is needed to complete the meaning of the noun. To determine if the word is needed, read the sentence without it.

Punctuate:

The word "check" has many different meanings.

278. none

279

Punctuate:

The representatives are George Cox, James Kilpatrick, Lee Anderson, and Alvin Dose.

15. sentence

16

Read:

To type rapidly and accurately while keeping her eyes on the copy.

The word "type" is not a verb because it is preceded by the word "to." "To" plus a verb is an infinitive; an infinitive is never the verb of the sentence. This group of words lacks both a subject and a verb; so it is a _____.

147. none

148

Punctuate the following sentences:

- a. The company subscribed to the magazine The Petroleum Industry in October.
- b. The word "geniune" is often mispronounced.
- c. The Great Depression began in the year 1930.
- d. William Whyte's book "The Organization Man" is required reading in many executive development programs.

If you punctuated all the above sentences correctly, go to frame 153.
If not, use frames 149-152 for practice.

279. none

280

The colon is used before a complete sentence which explains the preceding sentence. (A semicolon is not used here because the second independent clause is necessary to complete the meaning of the whole sentence.)

Punctuate:

The company attempted to impress the public in two ways music was piped into all offices, and the reception rooms were colorfully decorated.

16. fragment

17

Read:

A good typist attempts to type rapidly and accurately while keeping her eyes on the copy.

The addition of "A good typist attempts" provides a subject and a verb; the group of words now compose a _____.

148. a. none b. none c. none d. book, man,

149

Punctuate:

The book "Corporation Finance" is published by our company.

280. ways:

281

Punctuate:

There is only one thing about this letter which displeases me the placement is poor.

17. sentence

18

Label each of the following groups a fragment or a sentence:

- a. Please sign the contract if you agree to its terms.
- b. According to the report received by this office on January 18, 1966.
- c. Having been requested to refrain from taking break periods longer than fifteen minutes.

If you made correct responses, go to frame 23.

If you made an error, use frames 19-22 for more practice.

149. none

150

Punctuate:

The deed was dated in the year 1900.

281. me:

282

If the sentence which explains the preceding one is a formal rule or if it is to be emphasized, the first letter of the first word following the colon is capitalized.

Punctuate:

The supervisor forgot an important rule when you give a man a job, give him the authority to complete it.

18. a. sentence b. fragment c. fragment

19

Sentence or fragment?

The classes will be dismissed during the summer months.

150. none

151

Punctuate:

The word "tomato" is pronounced differently by New Englanders.

282. rule: When

283

Punctuate:

The teacher tried to emphasize this point never leave a line blank on an application form.

19. sentence

20

Sentence or fragment?

If you will be available to start work at the beginning of the year.

151. none

152

Punctuate:

Mr. Foster's new book "Business Problems" is now off the press.

283. point: Never

284

Punctuate the following sentences:

- a. The characteristics of a good secretary are these efficiency in her work, enthusiasm for her job, and ability to adapt to various situations.
- b. The employee was confused for this reason he was required to report to too many supervisors.
- c. Several people represented this department at the meeting Mark Long, Raymond Adams, Ted Sims, Joe Smith, and Helen Brown.

If you punctuated the above sentences correctly, go to frame 289.
If not, use frames 285-288 for practice.

20. fragment

21

Sentence or fragment?

Please place your letters on my desk.

152. book, Problems,"

153

Phrases in apposition are separated from the rest of the sentence if the word to which they refer is specifically identified.

Punctuate:

Mr. Jones of San Francisco visited the office today.

The phrase refers to "_____. " Since the word to which it refers is specific, the phrase (is separated, is not separated) from the rest of the sentence by commas.

284. a. these: b. reason: c. meeting:

285

Punctuate:

The machines needed for the new office are as follows typewriters, adding machines, and duplicators.

21. sentence

22

Sentence or fragment?

Having worked for the Federal Government for a long time during the Depression and for some time thereafter.

153. Mr. Jones is separated

154

Phrases in apposition are not separated from the rest of the sentence if the word to which they refer is not specifically identified.

Punctuate:

The man from San Francisco visited the office today.

The phrase refers to "_____." Since the word to which phrase refers is not specific, the phrase (is separated, is not separated) from the rest of the sentence by commas.

285. follows:

286

Punctuate:

The machines needed for the new office are typewriters, adding machines, and duplicators.

22. fragment

23

PREVIEW

A period indicates a long pause at the end of a complete thought.

Frames 24-41 deal with the use of the period following a

- a. statement
- b. command
- c. courteous request.

154. man is not separated

155

Punctuate the following sentences:

- a. Mr. Smith of the Los Angeles office won the award.
- b. The machine in the other room is to be returned to the manager for overhaul.
- c. John walking down the street saw the new building under construction.
- d. The employees having the longest record of service with the company will be given gold watches at the banquet.

If you punctuated all the above sentences correctly, go to frame 160.
If not, use frames 156-159 for practice.

286. none

287

Punctuate:

The work schedule requires careful planning during the summer for this reason that is when most of the employees take their vacations.

A sentence that makes a statement is followed by a period.

Read:

The supervisor placed the file in her tray

The sentence makes a statement; therefore, it is followed by a ____.

-
155. a. Smith, office, b. none 156
c. John, street, d. none

Punctuate:

The man from the typewriter repair service is due today.

-
287. reason: 288

Punctuate:

Wanted girl who can type rapidly, take dictation at 120 wpm, has a pleasing personality.

24. period

25

Read:

Your policy expires in thirty days

This sentence makes a s _ _ _ _ _ t.

It is followed by a _ _ _ _ _.

156. none

157

Punctuate:

Mr. Grant having been ill for a month decided to request his retirement early.

288. Wanted:

289

PREVIEW

Frames 290-341 illustrate the use of quotation marks in

- | | |
|---------------------------|---------------------|
| a. Direct quotations | b. Titles |
| 1. with period | c. Emphasized words |
| 2. with comma | d. Colon |
| 3. with question mark | |
| 4. with split quote | |
| 5. with semicolon | |
| 6. with exclamation point | |
-

25. statement period

26

Sentences which issue commands are also followed by periods.

Read:

Lock the safe when you leave

The sentence is a command; therefore, it is followed by a _____.

157. Grant, month,

158

Punctuate:

Mr. Hawk of our Personnel Department will speak to the new employees.

290

Place double quotation marks around the exact words of the speaker or writer (" ").

Read:

a. He said that he was going to the bank.

b. He said I am going to the bank.

The sentence containing the exact words of the speaker is (a/b) _____.
Therefore, double quotes would precede the word _____ and
follow the word _____.

26. period

27

Punctuate:

Please give Mr. Smith my message

158. Hawk, Department,

159

Punctuate:

All supplies arriving in the stockroom before the first of the month are to be coded with the new inventory numbers.

290. b I bank

291

A comma separates the material telling who made the statement from the statement itself.

Punctuate:

He said "I am going to the bank."

27. message.

28

Punctuate:

Type your initials after the dictator's initials, please

159. none

160

To determine whether a dependent clause in apposition is needed, read the sentence without it and follow this rule:

If it is needed to complete the meaning of the sentence, don't separate it from the rest of the sentence by commas.

Punctuate:

The man who transferred from the Boston office works in the Legal Department of this company.

291. said,

292

Periods are always placed inside the last quotation mark in business writing.

Punctuate:

He said, "I am going to the bank

28. please.

29

To present a more courteous attitude, a request may be written in the form of a question. Such a sentence is called a courteous request, and it is followed by a period.

Read:

Will you please mail the reply card today

This sentence is a _____ request; therefore, it is followed by a _____.

160. none

161

If a dependant clause in apposition is needed to complete the meaning of the sentence, it is called restrictive because it restricts the meaning of the sentence.

Punctuate:

Students who receive a 4.0 average are excused from the final examination.

292. bank."

293

Always read the words which you think are the direct words of the speaker to see that they logically would be said by someone.

Punctuate:

The typist said that she made a mistake.

29. courteous period

30

A courteous request requires only action. A written or oral reply is not expected as the result of a courteous request.

Punctuate:

Will you please ship the order before January 31

161. none

162

If the dependent clause is not needed to complete the meaning of the sentence, separate it from the rest of the sentence by commas; it is a nonrestrictive (not necessary) clause.

Punctuate:

John Peterson who transferred from the Boston office works in the Legal Department of this company.

293. none

294

Always capitalize the first letter of the first word of a direct quotation.

Punctuate:

John Adams, who supervised the programmers, said to Joe, "we need that program immediately."

30. 31.

31

A direct question requires an oral or written reply. The reply itself is not considered to be action. A direct question is followed by a question mark.

Punctuate:

Can you ship the order before January 31

162. Peterson, office,

163

When the words this, that, these, and those come before a noun, they identify the noun specifically. The clause in apposition with it is not necessary to the meaning of the sentence and must be separated from the rest of the sentence by commas.

Punctuate:

This typewriter which I just purchased needs a new ribbon.

294. "We

295

"Said" or any synonym for it (remarked, shouted, stated, etc.) may be used to introduce a direct quotation (the exact words of the speaker.)

Punctuate:

Mr. Wilson remarked, rewrite that letter so that it gives the impression that we are making the refund graciously."

 31. 31?

32

Before you punctuate a sentence which seems to be a courteous request, ask yourself, "Does this sentence require only action, no oral or written reply?" If it requires only action, it is a courteous request and is followed by a period.

Punctuate:

Will you please return the questionnaire in the enclosed envelope

 163. typewriter, purchased,

164

If the word which comes before the noun describes the noun specifically, such as "Jane's book," "his desk," etc., the clause in apposition with the noun is separated from the rest of the sentence by commas.

Punctuate:

His father who is president of the company made him a vice-president.

 295. "Rewrite

296

Punctuate:

The older teacher said, "That isn't the way we did it before."

32. envelope.

33

Punctuate the following sentences:

- a. Please take my calls while I am in the meeting
- b. We have eight paid holidays during the year
- c. When is the meeting
- d. Will you please fill in the enclosed card and return it to us at once

If you made correct responses, go to frame 42. If you made an error, use frames 34-41 for more practice.

164. father, company,

165

Dates specifically identify correspondence to which they refer and cause the clause in apposition to be nonrestrictive (not necessary).

Punctuate:

The credit manager replied to the letter of February 12 in which the adjustment was claimed.

296. before."

297

Punctuate:

The personnel officer commented to the applicant "You have a fine scholastic record."

33. a. meeting. b. year. c. meeting? d. once.

34

Punctuate:

May I have your current address so that all future mail can be forwarded to you

165. February 12,

166

Dependent clauses beginning with certain words or phrases are always considered nonrestrictive, or not necessary, and are separated from the rest of the sentence by commas. Examples: although, all of which, though, for, no matter, none of whom, some of whom, and whereas.

Punctuate:

I notice that although you typed rapidly you prepared a perfect letter.

297. applicant,

298

When the exact words of the speaker occur at the beginning of the sentence, they are followed by a comma. The comma is always placed inside the quotation mark in business correspondence.

Punctuate:

"I made a mistake said the typist.

34. you.

35

Punctuate:

Will you please send me the free supplementary materials listed in your brochure

166. that, rapidly,

167

Dependent clauses beginning with certain words and phrases are always considered necessary or restrictive, and are not separated from the rest of the sentence by commas.

Example: in order to, so...as, so...that, than, etc.

Punctuate:

This company has a higher production curve than has any other company in the industry.

298. mistake,"

299

Punctuate:

We need the program immediately," said John Adams, who supervised the programmers.

35. brochure.

36

Punctuate:

Won't you ask Mr. Simmons to call me after he reads the report

167. none

168

Punctuate the following sentences:

- a. "Occupational Outlook" which is published by the superintendent of documents should be included in every school library.
- b. The letter which has the typographical error cannot be mailed.
- c. These letters which are not mailable cost the company \$86.
- d. Jack's mail which was opened by his secretary contained a letter marked "Confidential."

Check your answers and go to frame 169 to continue the test.

289. "We

300

Punctuate the following sentences:

- a. That isn't the way we did it before the older teacher remarked
- b. The author commented that his new book was a great success
- c. He said I made the adjustment for Mr. Parks yesterday
- d. The supervisor said that I could have an extended lunch period today

If you punctuated the above sentences correctly, go to frame 305.
If not, use frames 301-304 for practice.

36. report.

37

Punctuate:

The stock of that company is listed on the New York Stock Exchange

168. a. Outlook," documents, b. none
c. letters, mailable, d. mail, secretary,

169

Punctuate the following sentences:

- a. We wrote you a letter on March 27 when your bill first became due.
- b. He sorted six batches of cards none of which had been punched properly.
- c. He worked so rapidly that he finished the report before the deadline.

If you punctuated all the sentences in frames 168 and 169 correctly, go to frame 180.

If not, use frames 170-179 for practice.

300. a. "That before," remarked, b. success.
c. said, "I yesterday." d. today.

301

Punctuate:

The secretary remarked the newspaper is on your desk

37. exchange.

38

Punctuate:

Will you speak at the April meeting of the American Management Association

169. a. March 27, b. cards, c. none

170

Punctuate:

The invoice has been extended correctly no matter what the clerk says.

301. remarked, "The desk."

302

Punctuate:

There's a mistake in the invoice said the bookkeeper

38. Association?

39

Punctuate:

Date all accounting reports as of the last day in the month

170. correctly,

171

Punctuate:

Our office manager who gave a speech at the meeting is now branch manager of the International Corporation.

302. "There's invoice," bookkeeper.

303

Punctuate:

The sales manager said that the Pacific Northwest area had the largest increase of new customers.

39. month.

40

Punctuate:

What is the topic of your speech

171. manager, meeting,

172

Punctuate:

Alvin Doe who is the production manager will retire this year.

303. none

304

Punctuate:

Rewrite the letter so that it gives the impression that we are making the refund gladly stated the credit manager.

40. speech?

41

Punctuate:

Will you please sign and return your contract before March 15.

172. Doe, manager,

173

Punctuate:

The employee who was selected for the award works in the Accounting Department.

304. "Rewrite gladly,"

305

The question mark is placed within the quotation mark if only the quoted material is a direct question.

Punctuate:

He said, "Who called while I was gone

41. March 15.

42

Frames 43-60 concern the question mark.

1. These frames distinguish between the punctuation used for a direct and an indirect question.
2. Illustrate the punctuation of a direct question following a statement.
3. Show how the question mark is used following an abbreviation.

173. none

174

Punctuate:

These contracts which have been signed by both parties can now be filed.

305. gone?"

306

Punctuate:

"Where are you going she asked.

As you noticed in previous frames, a direct question requires an answer. It is followed by a question mark.

Read:

What time is it

The sentence requires an _____.

Therefore, it is followed by a _____.

174. contracts, parties,

175

Punctuate:

John's only son who graduates from college this year is going into the training program of this company.

306. going?"

307

The question mark is placed outside the quotation mark if the whole sentence is a direct question. Remember that a direct question requires an answer.

Punctuate:

Did he say, "I am going to the bank

43. answer question mark

44

On the other hand, a sentence may indicate that a question had been asked. Such a construction is called an indirect question. It is followed by a period.

Read:

a. Where is the letter

Compare:

b. She asked where the letter was

Which sentence indicates that a question had been asked? (a/b) _____
It is followed by a _____.

175. son, year,

176

Punctuate:

We received your letter of March 8 in which you requested that we ship the merchandise by railway express.

307. bank"?

308

Punctuate:

Did the recruiting officer ask, "Why do you want to work for us

44. b period

45

Read:

The secretary asked where you were going.

This sentence is an i _ _ _ _ _ q _ _ _ _ _.

It is followed by a _ _ _ _ _.

176. March 8,

177

Punctuate:

She checked 30 invoices in an hour all of which were accurate.

308. us"?

309

The exclamation point has the same relationship to the quotation marks as does the question mark. If only the quoted material is said with emotion, the exclamation point is placed inside the quotation marks.

Punctuate:

She said, "Shut the door (Quoted material said with emotion)

45. indirect question period

46

Punctuate:

I asked him what time it was

177. hour,

178

Punctuate:

Operating employees in the communications and transportation industry work longer hours than employees in any other industry.

309. door!"

310

If the entire sentence is said with emotion, the exclamation point falls outside the last quotation mark.

Punctuate:

He exclaimed, "The safe wasn't locked

46. was.

47

Punctuate:

Where is Mr. Smith's office

178. none

179

Punctuate:

General Kirk who is retired from the United States Air Force is the new chairman of the board of the Lampex Company.

310. locked"!'

311

Punctuate:

He cried, "There's a fire in the wastebasket

47. office?

48

A question mark follows a direct question at the end of a statement.

Read:

You read Business Week, don't you?

The words "don't you" require an _____.

Therefore, they make the sentence a _____.

179. Kirk, Force,

180

You will remember that an introductory prepositional phrase is separated from the rest of the sentence only if it is parenthetical (not necessary).

Read: On June 1 we shall have a sale.

Compare: By the way on June 1 we shall have a sale.

The introductory prepositional phrase is not necessary and should be separated from the rest of the sentence by a comma in (a/b) _____.

311. wastebasket".

312

Punctuate the following sentences:

- a. The customer said, Why don't I get the discount
- b. "Why don't I get the discount the customer said.
- c. Did the customer ask, Why don't I get the discount
- d. She said, "There's a mouse in the storeroom
- e. "The clerk hit me screamed the angry customer.

If you punctuated the above sentences correctly, go to frame 318.
If not, use frames 313-317 for practice.

48. answer direct question

49

Punctuate:

You finished typing the report, didn't you

180. b

181

A general rule, however, is that the introductory prepositional phrase should be separated under these circumstances:

- a. If it is long (5 or more words)
- b. If it contains two or more related prepositional phrases.

Punctuate:

At the end of the day all "Top Secret" material should be locked in the file cabinet.

-
312. a. discount?"
 b. discount?"
 c. discount"?
 d. storeroom!"
 e. me"'

313

Punctuate:

The customer wrote where can I get your new product

49. you?

50

Punctuate:

You did take the call, didn't you

181. day,

182

The introductory prepositional phrases should not be separated from the rest of the sentence, however, if they are needed to complete the meaning of the sentence.

Punctuate:

In the top drawer of the cabinet in the other room is the box.

313. wrote, "Where product?"

314

Punctuate:

Did he ask where can I obtain a copy of Quincy's latest book

50. you?

51

If a sentence ends with an abbreviation which is followed by a period, do not use a second period.

Punctuate:

The meeting is scheduled for 4 P. M.

182. none

183

Punctuate:

In the plan for the new building all the offices are located on the top floor.

314. ask, "Where book"?

315

Punctuate:

Where can I get your new product wrote the Mr. Ruper.

51. none

52

3
If a question ends with an abbreviation which is followed by a period, the question mark follows the period.

Punctuate:

Is the meeting scheduled for 4 P. M.

183. building,

184

Punctuate:

In the middle of the room stands the computer.

315. "Where product?"

316

Punctuate:

The lawyer shouted my client is innocent

52. P. M.?

53

Punctuate: *2*

The merchandise will be sent C. O. D.

184. none

185

An infinitive phrase, you remember, has the following characteristics:

- a. It begins with an infinitive ("to" plus a form of some verb; i.e., to play).
- b. It can have an object and/or modifiers.

An introductory infinitive phrase is separated from the rest of the sentence by a comma.

Punctuate:

To operate the calculator correctly you must first clear it.

316. shouted, "My innocent"!

317

Punctuate:

He asked where the research for our report was done

53. none

54

Punctuate:

Will your firm send us the merchandise C. O. D.

185. correctly,

186

The introductory infinitive phrase is not separated from the rest of the sentence, however, if it is the subject of that sentence.

Punctuate:

To want to excel is commendable.

317. done.

318

The semicolon is always placed outside the quotation mark.

Punctuate:

The ~~ma~~anager said, "I have a meeting now" and he left immediately.

54. C. O. D.?

55

Punctuate:

- a. How much does a ream of this letterhead paper cost
- b. He asked where the new supplies were stored
- c. He doesn't work here any more, does he
- d. Shall I report to work at 8 a.m.

If you made correct responses, go to frame 61.

If you made an error, use frames 56-60 for more practice.

186. none

187

If the infinitive phrase is placed at the end or in the middle of the sentence, it is not separated from the rest of the sentence by a comma unless it is definitely not needed. Read the sentence with and without the phrase to determine if it is needed.

Punctuate:

The correspondence to be sorted is in the drawer.

318. now";

319

Punctuate:

The secretary remarked to her friend, "I believe I've lost my notebook however, she had only misplaced it."

55. a. cost? b. stored. c. he? d. a.m.?

56

Punctuate:

Where is the new branch office located

187. none

188

Punctuate:

To be successful a person must have ambition and perserverance.

319. notebook";

320

Occasionally the material telling who said the words interrupts (splits) the sentence. In that case

- a. a comma and a closing quotation mark precede the interrupting element.
- b. a comma follows the interrupting element.
- c. the quotation continues with an opening quotation mark and small letters.

Punctuate:

"Yes, I am going to the game he said because I have to take tickets."

56. located?

57

Punctuate:

The manager asked if you could work overtime

188. successful,

189

Punctuate:

A salesman must have a thorough knowledge of a product to sell it readily.

320. game," said, "because

321

Punctuate:

"This letter the supervisor remarked cannot be mailed."

57. overtime.

58

Punctuate:

Will the shipment be sent to us f.o.b

189. none

190

Punctuate:

To become a Certified Professional Secretary requires considerable study.

321. letter," remarked, "cannot

322

Punctuate:

"Punctuation is used the author stated to clarify the meaning of a sentence."

58. f.o.b.?

59

Punctuate:

You aren't through tabulating the replies, are you

190. none

191

REVIEW

A participial phrase has the following characteristics:

- a. It begins with a participle (some form of a verb).
- b. It is used as an adjective (describes or limits a noun).
- c. It can have an object and/or modifiers.

An introductory participial phrase is separated from the rest of the sentence by a comma.

Punctuate:

Having typed all the letters the secretary reorganized her desk.

322. used, stated, "to

323

Punctuate the following sentences:

- a. "This program said Joe, the new programmer does not work."
- b. The recruiter said although you have a good record, you do not have enough experience for this job and he immediately called the next applicant.
- c. "I believe the secretary stated that I've lost my notebook."

If you punctuated the above sentences correctly, go to frame 328.
If not, use frames 324-327 for practice.

59. you?

60

Punctuate:

The supervisor asked who typed this letter

191. letters,

192

If the participial phrase occurs in the middle or at the end of the sentence, it is separated only if it is not necessary to the meaning. Read the sentence with and without the phrase to determine how it should be punctuated.

Punctuate:

I refer to your letter of March 12 requesting an adjustment on the machine you purchased on March 3.

323. a. program," programmer, "does
 b. said, "although job";
 c. believe," stated, "that

324

Punctuate:

He said, "I will call the contractor today and then he left the office.

60. letter.

61

Frames 62-231 contain a review of the common comma usages, such as

- a. Noun in direct address
- b. Series
- c. Parenthetical Expressions
- d. Apposition
- e. Introductory Elements
- f. Adjectives
- g. Compound Sentences

192. March 12,

193

Punctuate:

Planned in a haphazard manner the new procedure failed.

324. today";

325

Punctuate:

"All our heavy equipment he said is leased to several companies in this state."

A period requires a long pause after a complete sentence.

A comma, however, requires only a s _ _ _ t pause within a sentence.

193. manner,

194

Punctuate:

Knowing the importance of efficient procedures in recordkeeping the new manager reorganized our Accounting Department.

325. equipment," said, "is

326

Punctuate:

"No one commented the manager is expected to work overtime in this company."

62. short

63

Read:

I cannot work late Mr. Jones.

The pause after "late" is s _ _ _ t; therefore, "late" is followed by
a _____.

194. recordkeeping,

195

Punctuate:

The union lost the election having been defeated by three votes.

326. one," manager, "is

327

Punctuate:

The visitor remarked, "I am a friend of Mr. Jones and he sat down to
wait for him.

63. short comma

When you speak to someone, the word or name used to point out that person is called a noun in direct address. That noun is separated from the rest of the sentence by a comma.

Punctuate:

Mr. Jones we are promoting you to sales manager.

195. election,

Don't confuse an introductory participial phrase, which is separated, with an introductory gerundial phrase, which is not separated from the rest of the sentence.

A gerundial phrase has these characteristics:

- It is a verb form.
- It ends in ing.
- It is used in a noun position; i.e., subject, object, predicate nominative.

Punctuate:

Having typed all the letters in one hour is a fine accomplishment.

327. Jones'';

Titles of books, booklets, and pamphlets may be treated in any of the following ways:

- Placed in quotes
- Underscored without quotation marks
- Written in all upper case letters

In this program such titles will be placed in quotation marks. Remember that the period is always placed inside the quotation marks.

Punctuate:

I read Gone with the Wind

64. Jones,

65

If the noun in direct address occurs at the end of the sentence, a comma is placed before it.

Punctuate:

We are promoting you to vice-president Mr. Jones.

196. none

197

Punctuate:

Having made a profit for the company the manager felt he deserved a promotion.

328. "Gone Wind."

329

Punctuate:

The company library has the book Management Problems

65. president,

66

If the noun in direct address occurs within the sentence, it is "set off" by commas. "Set off" means that a comma precedes and a comma follows the noun.

Punctuate:

You know Mr. Mason that we pay the shipping charges when you order in quantity.

197. company,

198

Punctuate:

Seeing the new file system in operation pleased him.

329. "Management Problems."

330

Words which the writer wishes to emphasize are enclosed in quotation marks. In this way the reader's attention is called to these words. (NOTE: Don't set off the emphasized word(s) if it is needed to complete the meaning of the sentence.)

Punctuate:

The word check has many different meanings.

66. know, Mason,

67

If a synonym for a person's name is used, it is still a noun in direct address and is punctuated in the same way.

Read:

I believe, gentlemen, that we should hire the man with the best potential for office manager.

Punctuate:

Yes sir I sent the letter to the file room.

198. none

199

Punctuate the following sentences:

- a. The secretary left at six o'clock having completed her overtime job.
- b. By the door was a drinking fountain.
- c. A person must have ambition and perserverance to be successful.
- d. To sell a product readily a salesman must have a thorough knowledge of it.

If you punctuated the above sentences correctly, go to frame 206.

If not, use frames 200-205 for practice.

330. "check"

331

Punctuate:

The material marked Top Secret must be signed out only to individuals cleared to handle it.

67. yes, sir,

68

Punctuate the following sentences:

- a. Mr. Chairman I call for the question.
- b. You see students we must cooperate with the administration.
- c. Yes Mary your answer is correct.
- d. No John I do not have your desk set.

If you punctuated all the above sentences correctly, go to frame 73.
If you punctuated one or more of the sentences incorrectly, use
frames 69-72 for practice.

199. a. o'clock, b. none c. none d. readily,

200

Punctuate:

Operated by a well-trained person the computer can save a great deal of
time.

331. "Top Secret"

332

The colon is placed outside the closing quotation marks.

Punctuate:

Study the following pages from the book entitled Reference Manual for
Secretaries 78, 85, 107, and 214.

-
68. a. chairman, b. see, students, 69
c. yes, Mary, d. No, John,

Punctuate:

Yes Mr. Jones your order was shipped on March 5.

-
200. person, 201

Punctuate:

Displaying merchandise effectively is important to its sale.

-
332. "Reference Secretaries": 333

Punctuate:

Please record the following transactions in the ledger marked Accounts Payable purchases on account, payments on account, purchase returns, and purchase allowances.

69. Yes, Jones,

70

Punctuate:

I believe that you will find all the papers in order Mr. Smith.

201. none

202

Punctuate:

At the desk by the window sits the bookkeeper.

333. "Accounts Payable":

334

A colon precedes a long direct quotation.

Punctuate:

The Chairman of the Board of Directors stated in his speech during the past year the company has made excellent progress; we have established three branches, hired 150 new employees, and increased sales 10 per cent

70. order,

71

Punctuate:

No sir I did not realize that I made a mistake in checking the order.

202. none

203

Punctuate:

To be honest I don't know the answer to your question.

334. speech: "During per cent."

335

Punctuate:

The Chamber of Commerce president made this comment new industry will come to a city only if that city provides an adequate labor force, has sufficient transportation facilities, and establishes an equitable tax structure

71. No, sir,

72

Punctuate:

Mr. Adams to whom am I to send the second copy of this letter?

205. honest,

204

Punctuate:

The employees received overtime pay having already worked forty hours that week.

335. comment: "New structure."

336

Punctuate the following sentences:

- a. Professor Evans made this statement in his new book research is useful only if it is performed with integrity, supported by adequate statistics, and published in professional journals
- b. These items are to be filed in the drawer marked Territories salesmen's report, accounting reports, and discrepancy reports.
- c. Have you read The Secretarial Handbook

If you punctuated the above sentences correctly, to go frame 341.
If not, use frames 337-340 for practice.

72. Adams,

73

A series consists of three or more items following each other in a sentence.

Read:

Men, women, and children are covered by this policy.

1 2 3

The three underscored words form a _____.

204. pay,

205

Punctuate:

All the employees belonging to the union must be given time to attend this meeting.

336. a. book: "Research journals."

337

b. "Territories":

c. "The Handbook"?

Punctuate:

The word receive is often misspelled.

73. series

74

Each item in a series is separated by a comma from the next item. To be consistent, a comma is also placed before the word which connects the last two items--in business correspondence.

Punctuate:

She types letters reports and forms.

205. none

206

Introductory dependent clauses are separated from the rest of the sentence (the independent clause) by a comma.

Punctuate:

After you finish writing the program will you please check it with the head programmer.

337. "receive"

338

Punctuate:

We obtained several copies of a pamphlet entitled How to Prepare for an Interview

74. letters, reports,

75

The word which connects items in a series is called a conjunction. If each item in the series is connected with a conjunction, that conjunction replaces the comma; and, therefore, no commas are used in such a series.

Punctuate:

She types letters and reports and forms and charts.

206. program,

207

If the dependent clause follows the independent clause, however, it is separated from the rest of the sentence only if it is not necessary to the meaning of the sentence. Read the sentence to determine the punctuation.

Punctuate:

You cannot receive your diploma until your fees are paid.

S V

338. "How Interview."

339

Punctuate:

The letter marked Copy should be sent to the customer for his records.

75. none

76

The conjunctions most frequently used in a series are and, or, and nor. If a series of subjects (S) precedes the verb (V), no comma follows the series because the comma would separate the series of subjects from its verb.

Punctuate:

John Joe or Ray will represent the Sales Department.
 S S S V

207. none

208

Punctuate the following sentences:

- a. Although the employees own 60 per cent of the stock the largest individual stockholders are people outside the company.
- b. We shall credit your account as soon as we receive your check.
- c. As the Nogood Company has been declared bankrupt by the court all of its equipment will be sold at public sale.

If you punctuated the above sentences correctly, go to frame 214.
 If not, use frames 209-213 for practice.

339. "Copy"

340

Punctuate:

The manager said in his orientation to the new employees this company has a long record of progressive management, and you will be given every opportunity to prove yourself in the performance of your job and in your ability to adjust to your co-workers.

76. John, Joe,

77

If a series of objects (O) follows the verb, no comma precedes the series because the comma would separate the verb from its objects.

Punctuate:

You must timestamp letters reports and memos.

V O O O

208. a. stock, b. none c. court,

209

Punctuate:

You can expect a higher salary when you become a supervisor.

340. employees: "This co-workers."

341

PREVIEW

Frames 342-352 illustrate the following uses of the dash:

- a. for an afterthought
 - b. before these and all
-

77. letters, reports,

78

If a series of adjectives (A) occur, do not separate the last adjective from the noun (N) it describes.

Punctuate:

Efficient enthusiastic and diligent employees are scarce.
 (A) (A) (A) (N)

209. none

210

Punctuate:

If, however, you agree to pay for the damages my company will not sue.

342

A dash is more emphatic than a comma, a semicolon, or a colon. It may be used instead of a comma when a parenthetic or appositive element requires more emphatic separation than a comma would provide.

Punctuate: (Assume emphasis on parenthetic element)

I am interested in only one teaching position business education teacher.

78. Efficient, enthusiastic,

79

Punctuate the following sentences:

- a. A good secretary organizes the bond paper carbon paper and second sheets in her desk so that they are easily accessible.
- b. Business mathematics business correspondence and office management are essential subjects for the prospective office worker.
- c. Neither paper clips nor pencils nor rubber bands may be ordered till the end of the month.

If you punctuated all the above sentences correctly, go to frame 84.

If you punctuated one or more of the sentences incorrectly, use frames 80-83 for practice.

210. damages,

211

Punctuate:

While you were away Mr. Jones, the telephone rang.

342. position--business

343

Punctuate: (Assume emphasis on parenthetical element)

We believe that all citizens our employees as well should contribute to this drive.

79. a. paper, paper, b. mathematics, correspondence, c. none 80

Punctuate:

The Acme Company expects to relocate in Dallas San Francisco or Akron.

211. away, 212

Punctuate:

Whether you travel via plane, train, or bus the ticket is tax-exempt.

343. citizens--our well--should 344

A dash is used before these and all when these words introduce a statement which summarizes a preceding list.

Punctuate:

Managers, clerical employees, and operators all employees attended the Christmas party.

80. Dallas, San Francisco,

81

Punctuate:

Rapid accurate and neat typing is appreciated.

212. bus,

213

Punctuate:

I gave the file on the Madison case to Mr. Newton who is the lawyer for the defense.

344. operators--all

345

Punctuate:

Paper, pencils, and envelopes these are the items you must requisition.

81. Rapid, accurate,

82

Punctuate:

Executives managers and operating employees contributed to the fund.

213. Newton,

214

Adjectives are words that describe or limit nouns. When two or more adjectives precede a noun, separate them by a comma if

1. the word "and" can be inserted between them and the sentence still makes sense.
2. the two adjectives can be reversed and the sentence still makes sense.

Punctuate:

He is a diligent enthusiastic employee.

345. envelopes--these

346

A dash is frequently used to indicate a break in the thought of the sentence, or an afterthought.

Punctuate:

The deans of the various colleges I believe there are six held a meeting regarding this proposal.

82. Executives, managers,

83

Punctuate:

Typing reports and filing correspondence and answering the telephone are her primary duties.

214. diligent,

215

Do not separate the adjectives by a comma if the first adjective modifies the second adjective and the noun.

Punctuate:

The head bookkeeper uses the large oak desk.

346. colleges--I six--I held

347

Punctuate:

Professor Jones he's the new one, you know came here from Texas.

83. none

84

You may also have a series of phrases. A phrase has the following characteristics:

- a. It contains a group of closely related words.
- b. It does not contain a subject and a verb.

Read:

The clerk looked (for the paper).
 S V

The words in parentheses have these characteristics:

- a. They are closely related.
- b. They do not include a subject and a verb.
- c. Therefore, the group is a _____.

215. none

216

Punctuate the following sentences:

- a. The advertisement calls for a capable efficient person.
- b. The old brick building is to be demolished.
- c. The young teacher had prepared well-organized typing lesson plans.
- d. A new sales campaign was planned by the agency handling our account.

If you punctuated the above sentences correctly, go to frame 221.
 If not, use frames 217-220 for practice.

347. Jones--he's know--came

348

A dash is often used to show a break in thought or an afterthought in sales letters.

Punctuate:

This new polish stays glossy for months so durable, too.

 84. phrase

85

The first word of a phrase indicates the kind of phrase you have.

Read:

He looked (in the file).
S V

The first word of the phrase is _____.
It is a preposition; therefore, this is a p _____ 1
_____.

 216. a. capable, b. none c. none d. none

217

Punctuate:

The small corner office belongs to the administrative secretary.

 348. months--so

349

Punctuate the following sentences:

- a. She is interested in only one thing high pay!
- b. All our employees executives, middle management, and operating employees must contribute their best efforts to the primary goal of this company!
- c. Paper, staples, and ink these items were ordered last month.

If you punctuated the above sentences correctly, go to frame 353. If not, use frames 350-352 for practice.

85. in prepositional phrase

86

To be correct, each preposition should have an object. The object (O) can be found by asking "What?" after the preposition.

Read :

He looked in (what?) the file.
prep 0

If you ask "What?" after the preposition "in," your answer is the word . That word is the of the preposition.

217. none

218

Punctuate:

Accurate neatly typed letters make a good impression on the recipient.

349. a. thing--high b. employees--employees c. ink--these

350

Punctuate:

Typewriters, adding machines, and duplicating machines all such items must be serviced regularly.

86. file object

87

If the prepositional phrase involves people, ask the question "Whom?" after the preposition to find the object.

Read:

I gave the letter to Mary.

If "Whom?" is asked after the preposition, the answer is the word _____. That word is the _____ of the preposition.

218. Accurate,

219

Punctuate:

Well-groomed pleasant girls are needed for counter work.

350. machines--all

351

Punctuate:

This new typewriter has many unique type faces only 3 cents for each key!

87. Mary object ^

88

Prepositional phrases often include modifiers. A modifier (or adjective) is a word (or words) which describes or limits another word.

Read:

- a. He looked (in Jane's file).
- b. He looked (in the green file).

In both sentences "file" is described or limited by the underscored words which are called _____.

219. Well-groomed,

220

Punctuate:

Inactive files are placed in the old green file cabinets.

351. faces--only

352

Punctuate:

Everyone in the department even Mr. Tyler liked the new supervisor.

 88. modifiers (or ^{*}adjectives)

89

Each prepositional phrase is separated from the next one by a comma, and a comma precedes the word connecting the last two phrases.

Punctuate:

He looked in a file in desk drawers and in both trays.

 220. none

221

In review, an independent clause (I.C.) has the following characteristics:

- a. It is a group of related words.
- b. It makes a complete thought.
- c. It has a subject and a verb.

A comma precedes the conjunction which connects two independent clauses.

Punctuate:

The salesman returned with his records (and) he gave them to the clerk
typist. I.C. I.C.

 352. department--even Tyler--liked

353

PREVIEW:

Frames 354-395 illustrate the use of the apostrophe in

- a. contractions
 - b. possessives
-

89. file, drawers,

90

Punctuate:

My supervisor has worked in industry in education and for the government.

221. records,

222

The words which connect independent clauses are called co-ordinate conjunctions. The five co-ordinate conjunctions are and, but, for, or, nor.

Punctuate:

Accounting reports must be prepared at the end of each month but they are not sent to each department in the organization.

354

When two words are combined, frequently a letter (or letters) is omitted. An apostrophe is inserted at the point where the omission occurs. Such a combination is called a contraction.

Punctuate:

Theres an eraser in the desk.

90. industry, education,

Punctuate:

She looked for the book in her desk in the file cabinet and on the shelf.

222. month,

The co-ordinate conjunction does not belong to either independent clause; therefore, you must read each clause without it to be certain that each is independent. A comma precedes the co-ordinate conjunction only if the clause on each side of it is independent.

Punctuate:

I believe that many employees have been reporting to work late and
I.C.
that the supervisors will call a meeting to discuss this problem.
(dependent clause)

354. There's

Punctuate:

Whos responsible for this letter?

91. desk, cabinet,

92

An infinitive consists of the word "to" with a verb form immediately following it. An infinitive phrase has the following characteristics:

- a. It begins with an infinitive--example: to go.
- b. It can have an object and modifiers.

Read:

A good credit manager attempts to build new accounts, to collect overdue accounts, and to maintain old accounts.

The underscored groups have infinitives, objects, and modifiers. Therefore, they are a series of i _____ p _____.

223. none

224

Beware of inserting a comma before one of the conjunctions (and, but, for, or, nor) when it connects compound verbs. Always look for the verb first and then see if there is a subject to go with your verb. If there is not, you merely have a compound verb.

Punctuate:

He completed his cost reports (and) compared them with the predetermined standard.

355. Who's

356

None of the possessive pronouns (my, mine, our, ours, your, yours, his, hers, its, theirs) are written with apostrophes. You must be particularly careful, therefore, not to use an apostrophe in its when that word is a possessive pronoun.

Punctuate:

Its branches are located throughout the world.

 92. infinitive phrases

93

Each phrase in a series of infinitive phrases is separated from the next one by a comma.

Punctuate:

To work hard to save money and to live morally will build one's character.

 224. none

225

The understood subject you should be considered only once in a sentence--at the beginning. No comma precedes the conjunction when you have a compound verb.

Punctuate:

(You) Please complete the form and mail it in the enclosed envelope.
 V V

 356. none

357

To determine whether its requires an apostrophe, read the sentence saying it is. If the meaning is illogical, you have a possessive pronoun; and the apostrophe should not be used.

Punctuate:

The machine was placed on its base.

93. hard, money,

94

You must take care not to confuse a prepositional phrase beginning with "to" with an infinitive phrase.

Read:

- a. He walked (to the file).
- b. A typewriter (to work properly) must be cleaned often.

The sentence which has a prepositional phrase is (a/b) _____.
It is identified as such because it does not have a _____ form following "to."

225. none

226

Punctuate the following sentences:

- a. A salesman should be able to obtain at least 100 orders per week from that territory but he would have to call on customers eight hours per day.
- b. Mr. Smith not only worked in the Accounting Department but also ; acted as notary.
- c. Reply before March 1 and enclose the price list with your letter.

If you punctuated the above sentences correctly, go to frame 232.
If not, use frames 227-231 for practice.

357. none

358

Punctuate:

Its ribbon is old.

94. a verb

95

Punctuate:

A company strives to produce usable goods and services to make a profit and to maintain good public relations.

226. a. territory, b. none c. none

227

Punctuate:

The men in the training program are rotated from one job to another but can choose their area of interest at the end of the program.

358. none

359

Punctuate the following sentences:

- a. Its not my responsibility.
- b. Wheres the envelope?
- c. He said that its our problem to solve.
- d. Id like to leave early.

If you punctuated all the above sentences correctly, go to frame 364.
If not, use frames 360-363 for practice.

95. services, profit,

96

Punctuate:

His goals are to complete school to obtain a job and to travel abroad.

227. none

228

Punctuate:

The principal visited all the classes and he gave each one a lecture on the value of good citizenship.

359. a. It's b. Where's c. it's d. I'd

360

Punctuate;

The knob must be released from its normal position before the variable line spacer can be manipulated.

96. school, job,

97

A participle is a verb form used as an adjective.

Read:

- a. She dusted the desk.
b. The dusted desk was neat.

"Dusted" is a verb; however, it describes "desk" in sentence (a/b) ____
Therefore, it is used as an adjective. When a verb form is used as an
adjective, it is called a _____.

228. classes,

229

Punctuate:

Please submit your insurance application immediately or we shall not be
able to include you in the group policy coverage.

360. none

361

Punctuate:

Whos the new manager?

 97. b participle

98

The present participle ends in ing.

Read:

- a. The man is running to the elevator.
- b. The man running to the elevator is John.

In which sentence does "running" describe "man"? (a/b) _____.
 Since "running" is a verb form ending in ing and used as an adjective,
 it is called a p _ _ _ _ t p _ _ _ _ _ e.

 229. immediately,

230

Punctuate:

The office manager tried to be alert and efficient for he was working
 for a promotion.

 361. Who's

362

Punctuate:

Its too late to apply for a job that appeared in the classified
 advertisement section a week ago.

 98. b present participle

99

The past participle is the third principal part of the verb; for example, go, went, gone; work, worked, worked; see, saw, seen; sing, sang, sung; lose, lost, lost.

Read:

a. The man has lost his briefcase.

b. The lost briefcase was found.

In which sentence is "lost" a participle? (a/b) ____.

Since "lost" is the third principal part of the verb, it is called a p _ _ t p _ _ _ _ _ e.

 230. efficient,

231

Punctuate:

Please arrange the letters with their carbons in back of them and place them in my tray.

 362. It's

363

Punctuate:

You're expected to complete every blank on an application form.

99. b past participle

100

The perfect participle consists of the word having and the third principal part of a verb; for example, having gone, having worked, having lost, having seen, etc.

Read:

- a. He is having the letter retyped now.
- b. Having retyped the letter, the secretary placed it on his desk.

In which sentence is "having retyped" a participle? (a/b) _____.
 Since "having" and the third principal part of the verb are used,
 this is a p _ _ _ _ _ t p _ _ _ _ _ e.

231. none

232

Preview

Frames 233-271 deal with the following uses of the semicolon:

- a. between two independent clauses when no conjunction connects them.
- b. before a coordinate conjunction connecting two independent clauses when one or both have internal punctuation.
- c. before a conjunctive adverb which connects two independent clauses.
- d. before FOR EXAMPLE, NAMELY, THAT IS when these words introduce a list, enumeration, or example.
- e. between elements of a series which already contain commas.

363. You're

364

When a noun (N) ending in s immediately precedes another noun, the first noun is usually in the possessive form.

Read:

The lawyer's briefcase is on the desk.

N

The word "briefcase" is a noun, and the word "lawyer's" immediately preceding it is a noun ending in s. Consequently, "lawyer's" is in the _____ form in this sentence.

100. b perfect participle

101

A participial phrase has these characteristics:

- a. It is introduced by a participle.
- b. Since the participle is a form of some verb, it can have an object and/or modifiers.

Read:

Having dusted the desk, the secretary started her day's work.

1

2

The participial phrase is indicated by the number (1,2) ____.

233

A semicolon indicates a longer pause than does a comma. It is used to separate closely related independent clauses which are not joined by a connective.

Punctuate:

The letter is improperly placed on the page it also has a misspelled
I.C. I.C.
word.

364. possessive

365

To assure yourself that the noun ending in s immediately preceding another noun is in the possessive form, see if the word ending in s can logically be made the object (O) of the preposition of.

Read:

The lawyer's briefcase is on the desk.

The word "lawyer" can be made the object of the preposition "of" (briefcase of the lawyer).

P

O

Therefore, "lawyer's" is in the _____ form.

 101. 1

102

Each phrase in a series of participial phrases is separated from the next phrase by a comma.

Punctuate:

The secretary watched her replacement dusting the desk sorting the mail and preparing for dictation.

 233. page;

234

Punctuate:

I shall not be able to attend the January meeting I shall give you my proxy.

 365. possessive

366

Read:

The news report is presented at 5:30 p.m.

One cannot logically say "report of the new"; so "news" is merely an adjective describing "report" and is not in the _____ form.

102. desk, mail,

103

Punctuate:

The foreign visitor saw the employees in the accounting department using complicated machines handling invoices and preparing daily totals.

234. meeting;

235

Punctuate:

Mrs. Jones, you have an excellent credit rating your last installment, however, is sixty days past due.

366. possessive

367

Singular possessive (SP) is made from the singular (S) form of a noun. To form the possessive of a singular noun not ending in s, add an apostrophe and s to the noun (lawyer becomes lawyer's).

Punctuate:

The secretarys desk is near the door.
(desk of the secretary)

103. machines, invoices,

104

Punctuate the following sentences:

- a. The applicants were requested to take the tests to complete the application forms and to have an interview.
- b. He looked for the paper in the file in the tray and in his desk.
- c. You can anticipate working from 8 a.m. until 5 p.m. getting eight paid holidays per year and receiving five days sick leave this year.

If you punctuated all the above sentences correctly, go to frame 111.
If not, use frames 105-110 for practice.

235. rating;

236

You have learned that when independent clauses (I.C.) are connected with one of the co-ordinate conjunctions (and, but, or, for, nor) that conjunction is preceded by a comma.

Punctuate for review:

Many brand names include symbols which are recognized by the public
I.C.
and such symbols are very valuable to the company.
I.C.

367. secretary's

368

Punctuate:

An employees goal should be in agreement with the goal of the company for which he works.

104. a. tests, forms, b. file, tray, c. p.m., year,

105

Punctuate:

He visited in high schools in junior colleges and in universities.

236. public,

237

If either or both independent clauses contain internal punctuation, a semicolon precedes the co-ordinate conjunction.

Punctuate:

Even though the content of the report was accurate, it was poorly
I.C.
organized and the supervisor criticized the employee who prepared it.
I.C.

368. employee's

369

If a singular noun ends in an s or an s sound, you should add an apostrophe and s if another syllable is formed in the pronunciation of the possessive. (boss -- boss-es)

1 1 2

Punctuate:

My boss phone rang several times.

105. schools, colleges,

106

Punctuate:

She wanted to gain rapid promotions to make a good salary and to become an executive in the firm.

237. organized;

238

Punctuate:

You are expected to sponsor extra-curricular activities, Miss Jones and many of them meet in the evening.

369. boss's

370

Punctuate:

Mr. Jones office is being remodeled.

106. promotions, salary,

107

Punctuate:

The employees work overtime in June in September and in December.

238. Jones;

239

Punctuate:

This company has spent over a million dollars in advertising, I believe but this expenditure has not created sufficient new business to justify its continuation.

370. Jones's

371

If the singular word ending in s or an s sound contains more than one syllable, use only the apostrophe to form the singular possessive.

Punctuate:

Mr. Cor nel i us memorandum was posted on the bulletin board.
 1 2 3 4

107. June, September,

108

Punctuate:

He was accused of embezzling money from the company stealing company property and violating his bond agreement.

239. believe;

240

If a parenthetical word introduces the second independent clause, the comma preceding such a word is optional. Its use is a matter of choice:

Read:

The superintendent of a large city school system is well paid; but,

I.C. (1)

however, he has a great deal of responsibility.

I.C. (2)

"However" is a parenthetical word and is separated from the rest of the sentence by a comma, but the comma preceding it is _____.

371. Cornelius'

372

Punctuate:

I can recognize Mr. Tompkins writing.

108. company, property,

109

Punctuate:

She had experience in managing an office handling a set of books and writing routine letters.

240. optional

241

If a parenthetical phrase introduces the second independent clause, the comma preceding such phrases is optional. Its use is a matter of choice.

Read:

The superintendent of a large city school system is well paid; but, on the other hand, he has a great deal of responsibility.

"On the other hand" is a parenthetical phrase and is separated from the rest of the sentence by a comma, but the comma preceding that phrase is _____.

372. Tompkins'

373

Be careful not to place the apostrophe before the s in a noun ending in s.

Read:

- a. Mr. Steven's salary is over \$10,000.
- b. Mr. Stevens' salary is over \$10,000.

If we are talking about Mr. Stevens, which sentence is punctuated correctly? (a/b) _____.

109. office, books,

110

Punctuate:

He wanted to obtain his degree work for a national accounting firm and establish his own office within ten years.

241. optional

242

If a dependent clause introduces the second independent clause, the comma preceding the dependent clause is optional. Its use is a matter of choice.

Read:

The superintendent of a large city school system is well paid; but, since he has a great deal of responsibility, he deserves the money.

"Since he has a great deal of responsibility" is a dependent clause introducing the second independent clause. The comma preceding it is _____.

373. b

374

Punctuate:

Mr. Burns coat was stolen. (Assume his name is Burns)

110. degree, firm,

111

A clause has these characteristics:

- a. It consists of a group of related words.
- b. It has a subject and a verb.
- c. It can have an object and/or modifiers.

Read:

The employees prepared for the party.

S V prep. phrase (modifies "prepared")

The sentence consists of a group of _____ words. It has
a s _____, a v _____, and m _____. Therefore, it is
a _____.

242. optional

243

In this program you will follow the current trend of omitting marks of
punctuation which you are told are optional.

Punctuate:

This building does not have adequate facilities to house the new
equipment but if more outlets are installed, we shall be able to
accommodate it.

374. Burns's

375

The word preceding the gerund must be in possessive form. Remember
that the gerund is a verb form ending in -ing and used as a noun.

Punctuate:

He doesn't appreciate the supervisor correcting him.

 111. related subject, verb, & modifier clause

112

A clause may be independent or dependent. An independent clause is a complete thought. A dependent clause depends upon the independent clause to complete its meaning.

Read:

He worked long and diligently on the report because his raise depended upon it.

1

2

Section 1 indicates a (n) _____ clause and Section 2, a (n) _____ clause.

 243. equipment;

244

Punctuate:

This company maintains a fleet of cars for its salesmen and what is more, these cars are traded every two years.

 375. supervisor's

376

Punctuate:

John working hard impressed the manager.

112. independent dependent

113

Read:

She read the letter to her supervisor.
 S V O

The group of words are related; they contain a subject, verb, object, and modifiers. Therefore, the whole sentence is a _____.

244. salesmen;

245

Punctuate:

You work rapidly but however, you need to improve your accuracy.

376. John's

377

Punctuate the following sentences:

- a. A company profit is largely determined by its sales.
- b. The economics class will meet in Room 217.
- c. A witness testimony was contradictory.
- d. He dislikes the secretary working overtime.

If you punctuated all the above sentences correctly, go to frame 383.
 If not, use frames 378-382 for practice.

113. clause

114

Frequently the whole sentence is an independent clause and contains dependent clauses within it. A comma separates each clause in a series of dependent clauses.

Punctuate:

The committee concurred that John was a good choice for the office that he could quite likely be nominated and that he would be a diligent worker.

The entire sentence is an independent thought; but since the under-scored groups each depend on the rest of the sentence for meaning, they are _____ clauses.

245. rapidly;

246

As you will remember, the following adverbs are frequently used as parenthetical words:

However
moreover

nevertheless
consequently

furthermore
therefore

Punctuate for review:

I believe therefore that you are right.

377. a. company's b. none c. witness's c. secretary's

378

Punctuate:

The class money was stolen by thieves.

114. office, nominated, dependent

115

Punctuate:

The advertisement calls for a girl who can type letters who can take dictation and who can file correspondence.

246. believe, therefore,

247

The previously mentioned adverbs can also be used to connect two independent clauses. When these adverbs are used as conjunctions, they are conjunctive adverbs.

Read :

I shall not be able to attend the January meeting; therefore, I shall
I.C.
give you my proxy.
I.C.

In the above sentence, "therefore" connects two independent clauses; in this case "therefore" is called a conjunction.

378. class's

379

Punctuate:

One manager report was lost.

115. letters, dictation,

116

Punctuate the following sentences:

- a. We want applicants who are well informed regarding the company who present a good appearance and who can perform well on the tests.
- b. I know that he is honest that he adjusts easily and that he is qualified for the job.
- c. The company president said that he wanted to relocate in Dallas or that he wanted to find a city with a similar labor supply.

If you punctuated all the above sentences correctly, go to frame 120.
If not, use frames 117-119 for practice.

247. conjunctive adverb

248

The conjunctive adverb is preceded by a semicolon and followed by a comma.

Punctuate:

The letter is poorly centered moreover, it has a misspelled word.

379. manager's

380

Punctuate:

My boss wife calls several times each day.

116. a. company, appearance, b. honest, easily, c. none 117

Punctuate:

The job description for this job requires that the individual supervise all office employees in the main office that he report to the personnel manager and that he train all the new office employees.

248. centered; 249

Punctuate:

After March 1 you will receive one half of your regular salary by check twice a month however, your overtime pay will be accumulated and paid with the second check each month.

380. boss's 381

Punctuate:

Mr. Acropolis leased car was wrecked.

117. office, manager,

118

Punctuate:

We need a man who can supervise the salesmen who can increase sales volume and who can motivate the cooperation of the credit department.

249. month;

250

Punctuate:

Your grade on the performance test was excellent consequently, you are in line for promotion.

381. Acropolis'

382

Punctuate:

That salesman reports are always on time.

118. salesmen, volume,

119

Punctuate:

All employees who have worked ten years who have a good attendance record and who have superior merit ratings will be given a bonus at the end of the year.

250. excellent;

251

One syllable conjunctive adverbs (Examples: hence, so, yet, then, still, thus) are preceded by a semicolon but are not followed by a comma.

Punctuate:

The union contract stipulates that all employees must receive a fifteen-minute break each morning hence the break is considered a right and not a privilege.

382. salesman's

383

The plural possessive (PP) form is made from the plural (P) of the noun. If the plural of a noun ends in s, add only an apostrophe after the s to form the plural possessive. (boys, boys')
(P) (PP)

Punctuate:

The secretary placed the four lawyers briefcases on the conference table.

119. years, record,

120

A parenthetical expression consists of a word, phrase, or clause which is not necessary to the meaning of the sentence. It should be separated from the rest of the sentence by a comma.

Read:

However we do not use that type of filing cabinet in this office.

Which word can be omitted without changing the meaning of the sentence?
 _____. Therefore, that word is called a P _____.
 _____ l e _____ n and must be followed by a comma.

251. morning;

252

Punctuate:

Many members could not attend the meeting because of the railroad strike so we did not have a quorum.

383. lawyers'

384

The word preceding the possessive often gives a clue as to whether the possessive word is singular or plural. Example: one, a, and single indicate singular possessive; two (or more), many, several, etc., indicate plural possessive.

Punctuate:

The three firms presidents created an interest in vocational rehabilitation.

120. However parenthetical expression

121

Punctuate:

We do not use that type of filing cabinet in this office however,

252. strike;

253

Punctuate the following sentences:

- a. This building does not have adequate facilities to house the new equipment we shall move to a new building next year.
- b. During the summer no temporary employees will be hired therefore, the work load will be handled by the permanent employees.
- c. All applicants for office jobs are screened by tests and interviews still many people with undesirable character traits are employed.

Continue to frame 254, please.

384. firms'

385

Punctuate:

Several attorneys briefs were stolen.

121. office,

122

If a parenthetical expression occurs in the middle of a sentence, it is set off by commas.

Punctuate:

We do not however use that type of filing cabinet in this office.

253. a. equipment; b. hired; c. interviews;

254

Punctuate the following sentences:

- a. The letter is improperly placed on the page and moreover, it has a misspelled word.
- b. Many secretaries take courses after they graduate to improve or maintain their skills for as you know, the only valuable skill is a usable skill.

If you punctuated the sentences in frames 253 and 254 correctly, go to frame 260. If not, use frames 255-259 for practice.

385. attorneys'

386

Punctuate:

Many managers positions were eliminated.

122. not, however,

123

If the expression is an introductory prepositional phrase, be sure that you set it off only if it is truly parenthetical; that is, if it can be removed without changing the meaning of the sentence.

Read:

- a. By the way on February 28 the store will have a sale.
- b. On February 28 the store will have a sale.

In which sentence can the introductory prepositional phrase be omitted without changing the meaning of the sentence (a/b)? _____ Therefore, a comma should follow the word _____.

254. a. page; b. skills;

255

Punctuate:

I hope that we can obtain several new faculty if not, I shall have to teach four classes.

386. managers'

387

If the plural of a noun does not end in s, add an apostrophe and s to form the plural possessive.

Read:

The men meeting is planned for next week.

The word "men" is plural. Since it does not end in s, the plural possessive is formed by adding an _____ and ____.

123. a way

124

When introductory parenthetical expressions are used as essential adverbs, they are not set off.

Punctuate:

- a. However important the activity may seem to you, it is no more important than your class.
- b. Personally I think you are wrong.

255. faculty;

256

Punctuate:

The manager wished to eliminate peak loads and the resulting overtime in the Credit Department consequently, he suggested that cycle billing be initiated.

387. apostrophe s

388

Punctuate:

The women salaries were docked.

124. a. none b. personally,

125

Do not set off the expression which is normally parenthetical if it is necessary to the meaning of the sentence.

Punctuate:

- a. We do not on the other hand reimburse travelers who return their unused tickets after the 60-day limit.
- b. On the other hand was a diamond.

256. Department;

257

Punctuate:

Most permanent employees prefer to take summer vacations so temporary and part-time people are hired to assist with the work.

388. women's

389

Punctuate the following sentences:

- a. Their wives personalities were evaluated before the men were promoted.
- b. The children scholarships were awarded at the company honor banquet.
- c. Twenty minutes time is required for the completion of the test.
- d. The companies working together is essential to avoid a strike.

If you punctuated the above sentences correctly, you have completed the program. Congratulations! If you made a mistake, use frames 390-396 for practice.

125. a. not, hand, b. none

126

Punctuate:

By the way we must remember to requisition bond paper.

257. vacations;

258

Punctuate:

Economists have been predicting a business recession and if this prediction comes true, many businessmen will not be motivated to expand their plants.

389. a. wives' b. children's c. minutes' d. companies' 390

Punctuate:

The applicant had three years experience with computer equipment.

126. way,

127

Punctuate:

An accurate typist makes an accurate punch-card operator so they say.

258. recession;

259

Punctuate:

Yes, Mr. Olson, we shall be glad to send a representative to your house to investigate the operation of your airconditioning unit for service is guaranteed in the warranty.

390. years'

391

Punctuate:

The men company bowling league is in the first place.

127. operator,

128

Punctuate the following sentences:

- a. You too must understand the importance of loyalty to the organization by which you are employed.
- b. In other words a good credit rating depends primarily on your character.
- c. The student I admit had a good excuse.

If you punctuated all the above sentences correctly, go to frame 134.
If not, use frames 129-133 for practice.

259. unit;

260

Lists, explanations, and enumerations are often introduced by certain words and expressions--namely, that is, for example, for instance. A semicolon precedes the word or expression and a comma follows it.

Punctuate:

The management process includes four functions namely, planning, organizing, motivating, and controlling.

391. men's

392

Punctuate:

All employees working with the new equipment is essential.

128. a. You, too, b. words c. student, admit,

129

Punctuate:

Moreover the bank statement was reconciled incorrectly.

260. functions;

261

Punctuate:

Before choosing a college, one should consider a variety of schools for example, a private college, a junior college, and a multi-purpose university.

392. employees'

393

Punctuate:

Many companies representatives attend the Administrative Management meetings.

129. Moreover,

130

Punctuate:

Your supervisor in turn forwards your insurance application to the personnel office.

261. schools;

262

Occasionally the Latin abbreviation is used for that is (id est, i.e.), for example (exempli gratis, e.g.), and namely (videlicet, vix.). When the abbreviations are used, they are punctuated in the same manner as the word or expression they represent.

Punctuate:

Before choosing a college, one should consider a variety of schools e.g., private colleges, junior colleges, and multipurpose universities.

393. companies'

394

Punctuate:

An employee who expects to quit his job is expected to give the company six weeks notice.

130. supervisor, turn,

131

Punctuate:

I admit that the student had a good excuse.

262. schools;

263

If the words and expressions just mentioned are part of a parenthetical expression, they may be set off by commas or dashes.

Read:

Any item which a person buys on impulse--for example, cigarettes--should be placed near the cash register.

The words "for example" do not introduce a list, enumeration, or explanation; they are considered a part of a _____ expression. Therefore, the whole expression "for example, cigarettes," may be set off by _____ s or _____ s.

394. weeks'

395

Punctuate:

The salesmen records are kept in the Sales Department but copies are sent to the Accounting Department.

131. none

132

Punctuate:

You understand of course that our policy prohibits adjustments when the equipment has not been operated according to the directions in the manual.

(Go to page 1, frame 133)

263. parenthetical commas dashes

264

Punctuate:

Someone for example, Jim should represent the company at the meeting.

(Go to page 1, frame 265)

395. salesmen's

396

You have now completed the program on common punctuation usages.

CONGRATULATIONS!

ANSWER SHEETS

Dear Student:

Please record your answers on the attached answer sheets in the manner discussed on page 11 of your booklet, "A Review of Common Punctuation Usages by Means of Programmed Instruction."

Should you make a mistake in responding to a frame, please place a checkmark beside that incorrect answer on your answer sheet and return to the frame to determine why you answered incorrectly. The checkmarks are not charged against you; instead, they will form a basis for revision of the programmed material so that it will be clear to the student.

The back sheet attached to this page has spaces for you to indicate the number of frames assigned and the time required for you to complete this assignment. We are interested in knowing the average time required to complete the assignments so that we can gauge more accurately how much to assign from the booklet in the future.

We shall appreciate your following the instructions for the use of the program and the answer sheets. Should you have any questions regarding the use of this material, don't hesitate to ask your instructor for help.

We hope you enjoy this method of reviewing punctuation. GOOD LUCK!

2. _____ 3. _____ 4. _____ 5. _____
6. _____ 7. s _____ v _____ c _____
- T _____ 8. (a) _____ (b) _____ (c) _____
9. _____ 10. _____ 11. _____ 12. _____
13. _____ 14. _____ 15. _____ 16. _____
17. _____ 18. (a) _____ (b) _____ (c) _____
19. _____ 20. _____ 21. _____ 22. _____
24. _____ 25. s _____ t _____ 26. _____
27. _____ 28. _____ 29. _____
30. _____ 31. _____ 32. _____ 33. (a) _____
- (b) _____ (c) _____ (d) _____ 34. _____
35. _____ 36. _____ 37. _____ 38. _____
39. _____ 40. _____ 41. _____ 43. _____
- _____ 44. _____ 45. i _____
- q _____ 46. _____ 47. _____
48. _____ 49. _____
50. _____ 51. _____ 52. _____ 53. _____
54. _____ 55. (a) _____ (b) _____ (c) _____
- (d) _____ 56. _____ 57. _____ 58. _____
59. _____ 60. _____ 62. s _____ t _____ 63. s _____ t _____
- _____ 64. _____ 65. _____ 66. _____
- _____ 67. _____ 68. (a) _____
- (b) _____ (c) _____ (d) _____
- _____ 69. _____ 70. _____
71. _____ 72. _____ 73. _____
74. _____ 75. _____

76. _____ 77. _____
78. _____ 79. (a) _____
- (b) _____ (c) _____ 80. _____
81. _____ 82. _____
83. _____ 84. _____ 85. _____ p _____ l _____
86. _____ 87. _____ 88. _____
89. _____ 90. _____ 91. _____
- _____ 92. i _____ p _____ 93. _____
94. _____ 95. _____ 96. _____
- _____ 97. _____ 98. _____ p _____ t
- p _____ e 99. _____ p _____ t p _____ e 100. _____
- p _____ t p _____ e 101. _____ 102. _____
103. _____ 104. (a) _____
- (b) _____ (c) _____ 105. _____
- _____ 106. _____ 107. _____
108. _____ 109. _____
110. _____ 111. _____ s _____
- v _____ m _____ 112. _____
113. _____ 114. _____
115. _____ 116. (a) _____
- (b) _____ (c) _____ 117. _____
- _____ 118. _____ 119. _____
- _____ 120. _____ p _____ l e _____ n
121. _____ 122. _____ 123. _____
124. (a) _____ (b) _____ 125. (a) _____
- (b) _____ 126. _____ 127. _____

128. (a) _____ (b) _____ (c) _____
129. _____ 130. _____ 131. _____
132. _____ 133. _____ 134. _____
135. _____ 136. _____ 137. _____
138. _____ 139. (a) _____ (b) _____
(c) _____ (d) _____ 140. _____
141. _____ 142. _____
143. _____ 144. _____ 145. _____
146. _____ 147. _____ 148. (a) _____ (b) _____
(c) _____ (d) _____ 149. _____
150. _____ 151. _____ 152. _____
153. _____ 154. _____
155. (a) _____ (b) _____ (c) _____
(d) _____ 156. _____ 157. _____
158. _____ 159. _____ 160. _____
161. _____ 162. _____ 163. _____
164. _____ 165. _____ 166. _____
_____ 167. _____ 168. (a) _____
(b) _____ (c) _____ (d) _____
169. (a) _____ (b) _____ (c) _____ 170. _____
171. _____ 172. _____
173. _____ 174. _____ 175. _____
_____ 176. _____ 177. _____ 178. _____
179. _____ 180. _____ 181. _____
182. _____ 183. _____ 184. _____ 185. _____
186. _____ 187. _____ 188. _____ 189. _____

190. _____ 191. _____ 192. _____ 193. _____
194. _____ 195. _____ 196. _____ 197. _____
198. _____ 199. (a) _____ (b) _____ (c) _____
(d) _____ 200. _____ 201. _____ 202. _____
203. _____ 204. _____ 205. _____ 206. _____
207. _____ 208. (a) _____ (b) _____ (c) _____
209. _____ 210. _____ 211. _____ 212. _____
213. _____ 214. _____ 215. _____ 216. (a) _____
(b) _____ (c) _____ (d) _____ 217. _____
218. _____ 219. _____ 220. _____ 221. _____
222. _____ 223. _____ 224. _____ 225. _____
226. (a) _____ (b) _____ (c) _____ 227. _____
228. _____ 229. _____ 230. _____ 231. _____
233. _____ 234. _____ 235. _____ 236. _____
237. _____ 238. _____ 239. _____ 240. _____
241. _____ 242. _____ 243. _____ 244. _____
245. _____ 246. _____ 247. _____
248. _____ 249. _____ 250. _____ 251. _____
252. _____ 253. (a) _____ (b) _____ (c) _____
254. (a) _____ (b) _____ 255. _____
256. _____ 257. _____ 258. _____ 259. _____
260. _____ 261. _____ 262. _____ 263. _____
_____ 264. _____ (or) _____
265. _____ 266. _____
267. (a) _____ (b) _____ (c) _____
268. _____ 269. _____ 270. _____

271. _____ 273. _____ 274. _____ 275. _____
276. _____ 277. _____ 278. _____ 279. _____
280. _____ 281. _____ 282. _____ 283. _____
284. (a) _____ (b) _____ (c) _____ 285. _____
286. _____ 287. _____ 288. _____ 290. _____
_____ 291. _____ 292. _____
293. _____ 294. _____ 295. _____ 296. _____
297. _____ 298. _____ 299. _____ 300. (a) _____
_____ (b) _____ (c) _____
(d) _____ 301. _____ 302. _____
_____ 303. _____ 304. _____
305. _____ 306. _____ 307. _____ 308. _____
309. _____ 310. _____ 311. _____ 312. (a) _____
(b) _____ (c) _____ (d) _____ (e) _____
313. _____ 314. _____
315. _____ 316. _____
317. _____ 318. _____ 319. _____ 320. _____
_____ 321. _____
322. _____ 323. (a) _____
_____ (b) _____ (c) _____
_____ 324. _____ 325. _____
_____ 326. _____
327. _____ 328. _____ 329. _____
330. _____ 331. _____ 332. _____
333. _____ 334. _____
335. _____ 336. (a) _____

(b) _____ (c) _____ 337. _____ 338. _____
_____ 339. _____ 340. _____
342. _____ 343. _____ 344. _____ 345. _____
346. _____ 347. _____
348. _____ 349. (a) _____ (b) _____ (c) _____
350. _____ 351. _____ 352. _____
354. _____ 355. _____ 356. _____ 357. _____
358. _____ 359. (a) _____ (b) _____ (c) _____
(d) _____ 360. _____ 361. _____ 362. _____
363. _____ 364. _____ 365. _____ 366. _____
367. _____ 369. _____ 370. _____ 371. _____
372. _____ 373. _____ 374. _____ 375. _____
376. _____ 377. (a) _____ (b) _____ (c) _____
(d) _____ 378. _____ 379. _____ 380. _____
381. _____ 382. _____ 383. _____ 384. _____
385. _____ 386. _____ 387. _____
388. _____ 389. (a) _____ (b) _____ (c) _____
(d) _____ 390. _____ 391. _____ 392. _____
393. _____ 394. _____ 395. _____

This assignment was made:

I finished it in _____ minutes.

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Frames _____ to _____

Comments: _____

APPENDIX C

FORMULAE USED IN COMPUTING MANN-WHITNEY U

THE MANN-WHITNEY U TEST FORMULA
(Corrected for ties)

$$U = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1 \qquad U = 78.5$$

$$\sum T = (t^3 - t) \qquad \sum T = 14.40$$

$$z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{N \left(\frac{n_1 n_2}{N-1} \right) \left(\frac{N^3 - N}{12} - \sum T \right)}} \qquad z = 2.08$$

$$\begin{aligned} \text{probability} &= .0188 + .0188 \\ &= .0376 \end{aligned}$$

n_1 = number of cases in smaller of two groups.

n_2 = number of cases in larger of two groups.

R_1 = sum of ranks assigned to group whose sample size is n_1

$\sum T$ = sum of ties

t = number of observations tied for a given rank

VITA

Ruth Charlotte Moyer

Candidate for the Degree of

Doctor of Education

Thesis: AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS AND EFFICIENCY OF USING PROGRAMMED MATERIAL TO REVIEW PUNCTUATION IN TRANSCRIPTION CLASSES

Major Field: Business Education

Biographical:

Personal Data: Born March 27, 1924, at Nebraska City, Nebraska; the daughter of Fred Henry and Emma Elizabeth Moyer.

Education: Attended elementary and secondary schools at Nebraska City, Nebraska, and was graduated from Nebraska City High School in May, 1941. Received Bachelor of Science degree and Master of Education degree from the University of Nebraska, with a major in Business Education, in May, 1945, and February, 1958, respectively. Completed requirements for the Doctor of Education degree in May, 1967.

Professional Experience: Taught Business Education subjects at Arapahoe High School, Arapahoe, Nebraska, and McCook High School, McCook, Nebraska, 1945-46 and 1958, respectively. Employed as secretary at Western Union Telegraph Company, Denver, Colorado, 1946-47. Taught in Administrative School, Department of the Air Force, at Lowry AFB, Denver, Colorado, and Warren AFB, Cheyenne, Wyoming, 1948-54, and acted as Education Advisor for Department of the Army, Ft. Greeley, Alaska, 1954-56. Taught in the Administrative Services area at Colorado State University, Ft. Collins, Colorado, 1958-67.

Professional Organizations: Member of Delta Pi Epsilon, National Business Education Association, Mountain-Plains Business Education Association, and Colorado Business Education Association.