Copyright by
William A. McCartney
1963

THE UNIVERSITY OF OKLAHOMA GRADUATE COLLEGE

THE DEVELOPMENT OF AN OBJECTIVE INSTRUMENT FOR MEASURING THE WRITING ABILITY OF COLLEGE FRESHMEN

A THESIS

SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF PHILOSOPHY

BY
WILLIAM A. McCARTNEY
Norman, Oklahoma
1962

THE DEVELOPMENT OF AN OBJECTIVE INSTRUMENT FOR MEASURING THE WRITING ABILITY OF COLLEGE FRESHMEN

APPROVED BY

THE TOWN ON THE PART OF THE

ACKNOWLEDGMENT

Grateful acknowledgment of their aid and contributions is made to the following-named persons:

To Dr. Henry D. Rinsland, of the University of Oklahoma, who originally suggested and designed the study and who gave valuable assistance and advice in the early stages,

To Dr. Omer J. Rupiper, who assumed direction of the doctoral committee at the time of Dr. Rinsland's retirement, for his help and friendly encouragement, and to the other members of the committee: Dr. Henry Angelino, Dr. Charles Bridges, and Dr. Stewart Wilcox,

To Dr. Joseph H. Marshburn, of the English Department of the University of Oklahoma, whose friendly interest in the study made possible the first two administrations of the test.

To Mr. John Murphy, then a graduate assistant in English at the University of Oklahoma and later instructor in English at Notre Dame University and at the University of Colorado, for his interest, enthusiasm, help in administering the tests, and advice in their construction,

To Dr. Merril F. Heiser, Chairman of the English

Department at the University of Hawaii, for permitting the administration of the tests at that University, for his sincere interest in the study, and for his friendly encouragement and advice,

To Dr. John Digman, of the Department of Psychology at the University of Hawaii, for his invaluable assistance in statistical matters and in computer operations,

To Dr. Yuell Harris, Director of Research, Department of Education, State of Hawaii, for his interest in the study, advice, and assistance in scoring, and

To all instructors, of every academic rank, who participated in the project.

The generous grants of the McInerny and Juliette Atherton Foundations, of Honolulu, of funds for clerical help are also gratefully acknowledged.

TABLE OF CONTENTS

		Page
LIST OF	TABLES	vi
Chapter	terrent de la companya del companya del companya de la companya d	
ī.	INTRODUCTION	1
II.	THE ESTABLISHMENT OF THE CRITERION AND THE CONSTRUCTION, ADMINISTRATION, AND	
	SCORING OF THE TESTS	14
III.	CORRELATIONAL ANALYSIS AND INTERPRETATION .	34
IV.	ITEM ANALYSIS AND INTERPRETATION	39
ν.	DISCUSSION OF THE RESULTS	54
VI.	SUMMARY AND CONCLUSIONS	60
BIBLIOGE	RAPHY	63
APPENDIX	·	65

LIST OF TABLES

[abl	e -	Page
1.	Item Discrimination and Difficulty Indices for Reading Comprehension and Vocabulary Tests (Second Edition) for Students in Freshman Composition at the University of Oklahoma, May, 1957	27
2.	Matrix of Intercorrelations of Test Scores	35
3.	Distribution of Variations of Composites of Scores of Tests Designed for the Study from Criterion Scores, for Students in Freshman Composition at the University of Hawaii at the End of the First Semester, January, 1960	38
4.	Reliability Indices by Item for Reading Comprehension Test for Students in Freshman Composition, University of Hawaii; at the End of the First Semester, January, 1960	41
5.	Reliability Indices by Item for GUS Test for Students in Freshman Composition, University of Hawaii, at the End of the First Semester, January, 1960	42.
6.	Reliability Indices by Item for Vocabulary Test for Students in Freshman Composition, University of Hawaii, at the End of the First Semester, January, 1960	43
7.	Item Variances of Individual Items in Reading Comprehension Test for Students in Freshman Composition, University of Hawaii, at the End of the First Semester, January, 1960	44
8.	Item Variances of Individual Items in GUS Test for Students in Freshman Composition, University of Hawaii, at the End of the First Semester, January, 1960	45

Table		Page
9.	Item Variances of Individual Items in Vocabulary Test for Students in Freshman Composition, University of Hawaii, at the End of the First Semester, January, 1960	46
10.	The Olmstead and Tukey Peripheral Association by Test	49
11.	Individual Score Norms of Reading Comprehension Test for Students in Freshman Composition at the University of Hawaii, End of the First Semester, January, 1960	55
12.	Individual Score Norms of Vocabulary Test for 449 Students in Freshman Composition at the University of Hawaii, End of the First Semester, January, 1960	56
13.	Individual Score Norms of GUS Test for 449 Students in Freshman Composition at the University of Hawaii, End of the First Semester, January, 1960	57
.14.	Individual Score Norms for the Sum of Scores of All Three Tests for 449 Students in Freshman Composition at the University of Hawaii, End of the First Semester, January, 1960	58

CHAPTER

INTRODUCTION

Philosophical Considerations

For many years there has been controversy, as well as confusion, among people in the field of education regarding what should be offered in the so-called "English" In recent years interest in the problem of curriculum. improving instruction in "English" (more often called instruction in reading and writing than instruction in English) has spread widely among laymen of all degree. plaints are increasing that students being graduated from high schools and universities can neither read nor write satisfactorily. Conservative educators are making almost fantastic and sometimes hardly-relevant defenses of the status quo while some, more radical, educators are proposing changes in content and method which are as fantastic as the defenses of the conservatives. Most of the defenses and most of the proposals indicate no real understanding of the problem. Meanwhile the complaints continue to mount--complaints from some educators and teachers themselves, particularly from those at the college level, complaints from

students, complaints from parents, and complaints from those who employ the graduates of the high schools and colleges.

As the complaints and proposals multiply so does the amount of controversy and confusion.

What seems to be lacking, if the controversy is to be settled and the confusion resolved, is the realization that the underlying purpose of instruction in "English," particularly at the high school and college freshman levels. 1 is to stimulate and clarify thinking and at the same time to teach the students both to express their thoughts by means of the language and to receive and understand the verbal expressions of others. All too few, however, seem to be aware of this fact or at least to understand all that it implies. There can be no such thing as English or any other language, of and by itself, for back of language lies thought, and the thought and the expression of the thought seem to be quite inseparable. This fact also, few people seem to comprehend. What is lacking, in other words, is a clear and comprehensive philosophy of language, and it is the lack of this philosophy that is the underlying cause of the confusion in the so-called "English" curriculum.

It is not within the scope of this study to develop such a philosophy fully--indeed in the last analysis that

lCommunication is a better word than "English" (in quotation marks) to cover what is meant here, and it will be used in this study hereafter whenever it is the more appropriate term.

may be a matter too broad for the human mind to encompass—but it is necessary to discuss some of the important general considerations that should be included in such an undertaking. This will be attempted below in the section <u>Definitions of Terms</u> under the entry <u>Thought</u>.

The Need for the Study

In the light of the present state of affairs it is clear that a very great deal needs to be done if instruction in the use of language is to be related to the purpose of language and thereby to be drastically improved. Among the tasks to be accomplished, in addition to the development of a philosophy of language, are:

- l. The development of better definitions, consistent with the philosophy, in order to clarify the meanings of terms used in the teaching of verbal communication.
- 2. The development of criteria with which measures of achievement in the field of verbal communication may be correlated. This, in effect, is closely allied with the development of definitions.
- 3. The development of tests to measure achievement in the various areas comprehended under the term <u>communication</u>. The need is greatest for objective-type, machine-scorable tests in those areas in which scoring or evaluation is now based largely upon subjective judgment--for example, in writing ability.

If such tests, possessing reasonably high reliabil-

ity and validity, can be developed, they will fill an increasing need in education, for they may be used:

- 1. As the language part of a college-entrance examination. Colleges and Universities are increasing their demands for better instruments for this purpose with the increasing necessity for rejecting the unfit and the unprepared.
 - 2. As placement tests,
 - 3. As diagnostic tests,
- 4. As instruments by which administrators, chairmen of English departments, and the like may obtain evidence to use in the supervision of their teachers and in the standard-ization of instruction and grading,
- 5. As achievement tests in composition.

 This study may be justified, therefore, as an effort to contribute something toward the solution of the problem of improving instruction in English.²

Presumably the reverse action may result if the test

A possible side effect of proper achievement tests should be noted, for which the term helical (or spiral) regeneration of the curriculum is here proposed and the term helical (or spiral) degeneration of the curriculum for its opposite. Helical degeneration may occur when (1) test makers first examine the curriculum and then construct tests to cover what they find being taught—and this is often the procedure—and (2) then teachers, observing what is covered in the tests, begin to teach, perhaps with the best of intentions, what is covered in the tests. This is especially likely to occur if the teachers are graded on the basis of scores made by their students. When this action passes one cycle, the succeeding cycles may become progressively smaller, in helical fashion; that is to say, the scope of the curriculum may be progressively narrowed.

Statement of the Problem

The problem of the study is to construct a set of objective-type, machine-scorable tests to measure the writing ability of college freshmen. More specifically, the problem is to develop tests which measure three fields of knowledge closely related to writing ability: (1) reading comprehension, (2) grammar, and (3) vocabulary. The purpose of the study is to determine the feasibility of using these tests, for the purpose for which they were designed.

Definition of Terms

Grammar

It seems best to define grammar first in negative terms. Grammar is not a set of rules and definitions and exhortations to avoid "wrong" constructions and "wrong" usage, as if grammar had nothing to do with meaning. Neither is it a matter of sheer nomenclature.

Philosophically considered, grammar, so far as man is concerned, derives ultimately from man's observations of nature—in the widest sense of the word—from his observations of objects, actions, states of being, qualities, and

makers lead rather than follow the curriculum. Helical regeneration may then occur. It is not suggested that the curriculum should deliberately be reformed in this devious manner. Since it cannot be expected, however, that teachers will scrupulously avoid "teaching to the test," the effect of proper achievement tests—made by test makers who are aware of their responsibilities—may be to improve the curriculum considerably.

the like, and the relations among these that exist in the world of nature. The action of the wave striking the beach, for example, illustrates a type of relationship of this kind—the relation of the active agent to the act of strik—ing to the object stricken. Grammar ultimately, then, is of nature.

Since man can never "know" the objects, actions, qualities, and so on, but can only form, from experience and reflection, abstractions (or ideas or concepts of "images") of these matters, grammar comes to be considered to involve the relationships (which are themselves abstractions) which exist among the abstractions rather than among the objects and actions themselves. Grammar is therefore inseparably bound up with thinking and with meaning, and it may be said to be the set of relationships that exist among abstractions. These relationships, particularly those deriving directly from the world of nature and involving the first level of abstraction above the zero level -- the level of the thing itself--are universal, eternal, and immutable. They exist regardless of the language or of the method of the language that may be employed to express them. The relationship among the ideas symbolized by John and struck and James is the same in all languages or in no language, for it is not of language, but of nature. John can strike James in Sanscrit or Chinese, or Hottentot or even in Martian or Venutian, even though there may be no such languages.

Grammar divides into two parts: the universals and the accidentals. The first is comprehended under the term syntax, which involves three factors: predication, modification, and connection. In the last analysis, in the process of thinking or expressing thought we do only three things so far as syntax is concerned: we predicate, we modify, we connect. These three matters subdivide into various classifications. Predication, for example, occurs in English, and quite probably in many languages, at five levels and in four basic patterns. These basic patterns generate at least seven more patterns by addition and combination. The basic patterns are universals. Meaning and thought inhere in all the patterns.

The accidentals are comprehended under the term <u>accidence</u>. In English these matters of accidence are person, number, gender, case, voice, mood, tense, tense form, comparison, and position. All, except position, indicate changes in meaning by changes in the form of the word (e.g. <u>man</u>, <u>men</u>). Each form carries its own specific meaning and the various forms serve various purposes (e.g. the form <u>me</u> indicates the first person, singular, pronoun used objectively). The forms are accidental to the language. The ideas that lie behind the forms are universal—the idea of singularity and plurality, for example.

Punctuation, agreement of verb with subject, agreement of pronoun with antecedent, parallel structure for the expression of parallel ideas, and matters of this nature may be called conventions that have grown up with the language so that, by understanding the conventions, one may understand better what is said in the language. In spite of what has just been said, such matters as punctuation, agreement, parallelism and other matters of convention have been included in the test in grammar, usage, and structure.

Meaning

Briefly, that which is pursued, and sometimes captured, in the process of thinking. When this definition is taken together with the definition of thinking, it becomes circular.

Meaning may be considered to inhere in the following "elements of meaning," not always in one alone or partly in one element and partly in another but almost always among several elements considered collectively. The elements as given here do not represent mutually exclusive categories; more often than not they overlap widely. It is quite probable that the list is not complete, but it does represent the minimum that must be considered if communication by language is to be effective:

- 1. The denotations and connotations of words, particularly in their contexts,
 - 2. Grammar (q.v.),
 - 3. The principle of compatibility,
 - 4. Levels of abstraction,

- 5. The nature of figurative language,
- 6. Idioms,
- .7. Inference,
- 8. Allusion,
- 9. Relationships among thoughts,
- 10. Literary and rhetorical devices,
- ll. Symbolism.

Thinking (thought)

Briefly, the pursuit of meaning. When this definition is taken together with the definition of meaning, it becomes circular.

It is possible to explain thinking by tracing what seem to be the steps in its development:

- l. The cognition (and re-cognition) of objects, actions, states of being, qualities, and the like through observation, experience, and, later, reflection. Since one can never "know" an object—or an action or quality, etc.—but only his idea of it, this step is the first in the "ladder" of abstraction. The introduction and use of words to symbolize these abstractions is nearly simultaneous with this process in early childhood, and we may say that "meaning" becomes attached to the word-symbols. Thought and language become inseparably joined even at this level, and thereafter there is seldom much of one without the other.
- 2. The relating of these ideas or basic abstractions into certain "meaningful" relationships to form

"thoughts." It is the function of grammar (q.v.) to note and describe these relationships.

- 3. The cognition (and re-cognition) of similarities among objects, actions, etc. and from this cognition the development ideas of classes, of classes of classes, and so on.
- 4. The cognition of the fact that the chain of classification, or abstraction, need not necessarily begin with a concrete object or a specific action but that it may begin with another abstraction or idea of a quality inherent in an object or in an action—as, for example, one may develop the entirely abstract concept of beauty from experience with beautiful objects or a concept of speed by observing fast actions.
- 5. The relating together of the single thoughts explained in step 2, by relationships that lie beyond the grammatical relationships, into larger "bodies" of thought. Here are included such relationships as cause and effect, the part and the whole, principle and example, co-ordination and subordination, concession, and the like.

Briefly, then, thinking may be defined as the process by which the mind generates abstractions of various levels and relates them together, in the patterns of grammatical relationship, to form simple, or single, thoughts—in the process often passing from one level of abstraction to another—and then relates these thoughts together to form a unified structure suitable for coherent discourse.

Writing ability

The ability to put down in written form, according to the conventions of the language, the expression of a thought or of a body of thoughts. In this study, writing ability is thought of as a continuum of excellence in writing, from the ability to set down a single idea or thought, however confused the expression may be, up to some indescribable ability to set down a large body of coherent thoughts in an indescribably excellent manner. The standards of excellence are discussed in Chapter II, under Establishment of the Criterion. The term writing ability in this study applies primarily to degrees of excellence within a relatively small part of this continuum -- the general level of the high school senior and the college freshman. cifically, writing ability is defined in the text as whatever the instructors conceived writing ability to be, at the time they made their estimates, and as they saw it in their students.

Assumptions

The major assumption in this study is that while writing ability cannot be measured directly by any sort of objective-type test, it can be arrived at with reasonable accuracy from the scores of tests that measure closely related abilities or fields of knowledge. There are probably many such abilities and fields of knowledge that would serve the purpose reasonably well, but it is assumed that

the most suitable are those which may be measured by appropriate tests in (1) reading comprehension, (2) grammar (of the kind under <u>Definition of Terms</u>), usage, and structure, and (3) vocabulary. It is hardly to be doubted that all these matters are closely related to writing ability and that each one is related to the other two. Certainly reading and writing are basically complementary, and probably the same thought processes are involved in both. It is further assumed, as consequences of the major assumption, that:

- 1. He who can write well can probably read well,
- 2. To a reasonable degree the reverse is true, and
- . 3. He who can write well must have a good knowledge of grammar (properly defined), usage and structure, and a knowledge of the meanings of words in the language.

The question may be raised as to whether intelligence might not be an appropriate factor to be used here. At first thought it seems that it would be, for certainly behind the ability to write lies the ability to think, and if the ability to think is the equivalent of intelligence then it follows that intelligence should be an excellent predictor of writing ability. It should be remembered, however, that a measurement of reading comprehension is, in part, a measurement of intelligence, since thinking is basic in reading. Moreover, vocabulary is known to correlate highly and positively with intelligence, and a measurement of vocabulary would be, in part, a measurement of intelligence again. In view of all this there is a good possibility that the inter-correlations between reading comprehension and intelligence and between vocabulary and intelligence might be so high that very little would be added to the multiple correlation between predictors and criterion if an intelligence test were included among the predictors.

Procedure

The procedure followed in this study was: (1) to establish a criterion of writing ability, (2) to construct tests to measure reading comprehension, grammar, usage, and structure, and vocabulary, (3) to administer these tests to a large number of college freshmen students, (4) to compute the intercorrelations among the scores of these three tests and those of the criterion, (5) to compute the coefficient of multiple correlation between the scores of these three tests and those of the criterion, (6) to compute the reliability and validity indices of the items of each test and to determine the reliability and validity for each test, and (7) to develop appropriate norms.

CHAPTER II

THE ESTABLISHMENT OF THE CRITERION AND THE CONSTRUCTION, ADMINISTRATION, AND SCORING OF THE TESTS

The Establishment of the Criterion

The establishment of an adequate criterion of writing ability presents a major difficulty. Unless writing ability can be defined with some precision -- unless it is clear what the tests are supposed to test--it is not likely that any valid conclusions can be reached in this study. Unfortunately, and perhaps of necessity, there seems to exist no precise or adequate definition of writing ability or of the degrees of excellence in writing. It may be universally agreed that he who writes well writes with "clearness, elegance, and force," as the old books of rhetoric say, but these words denote characteristics which are far too general to be measured with any degree of precision. Most English teachers will insist that good writing must be "correct"; that is, in accordance with the widely accepted conventions of the language and free of "errors" in grammar (however conceived), usage, structure, idiom, diction, and "mechanics" generally. They will insist that the thoughts

must be related and organized clearly according to some pattern or principle of organization and that the expression must be coherent and concise. There can be no serious disagreement over any of these requirements, but they are all general and they do not lead to quantitative measurement.

It is necessary, therefore, to look beyond verbal definition for an understanding of writing ability and the establishment of a criterion as a result. Some sort of subjective judgment appears to be the only alternative.⁴

One common procedure is to employ a group of teachers or "experts"—sometimes only two, or three in the case of serious disagreement between the two—to read a short, single specimen of the writing of each student and to evaluate it according to some sort of scale. Because of the wide variations in the concepts of the readers as to what constitutes good writing—even though the instructions to the readers may be "structured" so as to provide some

⁴In the initial planning of this study some consideration was given to the suggestion of using a "count of errors" or "errors per unit number of running words" as the criterion. This suggestion was quickly rejected because it seemed obvious that there could be no complete agreement of what might constitute an "error" and certainly nothing approaching unanimity of opinion as to what any particular "error" might be worth in the scoring. Moreover, and more important, the acceptance of such a criterion would indicate a severely limited concept of writing ability. A theme may be quite free of so-called "errors" in grammar, structure, usage, diction, "mechanics," and the like and still be very poor, for writing, as here conceived, lies far beyond these matters although it is concerned with them.

uniformity of scoring; because of the wide variation among the readers of the elements of bias, whether permanent or transient, that may influence judgment; and because, for a variety of reasons, there is no assurance that any single specimen of writing is a representative sample of the writing of a college freshman, the scoring by this method is notoriously unreliable. It is highly probable that a criterion using scores derived in this manner would be quite unsatisfactory.

It would seem that the semester grades for courses in composition should provide a much better criterion than the subjectively-derived scores described above, if for no other reason than that the instructor has more specimens of the student's writing to consider and more time in which to form his judgment. The use of the semester grade as a criterion, however, as will be seen below, leaves much to be desired.

The criterion chosen for this study may be considered a refinement of the semester grade. It is the estimate made by each freshman composition instructor of the writing ability of each of his own students after one semester of instruction. Although this estimate is still subjective, it would seem to have certain advantages over the semester grade. It is believed that an instructor who has tried for one semester to teach a student to write is in a reasonably good position to evaluate the writing ability of that student.

It is believed also that despite the wide range of bias among them, the instructors are still in sufficiently close agreement concerning what writing ability is for their estimates to be taken as a workable criterion. The more instructors involved, of course, the more reliable the group of judgments is likely to be, because in a large group, the biases and the idiosyncrasies of one instructor will tend to balance out those of another. From all this it follows, then, that writing ability is defined as whatever the instructors thought writing ability to be, and as they saw it in their students, at the time they made their estimates.

It should be emphasized here that this study is essentially different from the usual strictly-predictive study. In the latter, a common procedure is to administer, at the beginning of the semester, a test that has already been developed; wait until the end of the semester; and then correlate the test scores with some criterion of performance—the semester grade, for example—and determine how well the test scores predicted the degree of success in the course. The problem in this study is to develop the test, and it is almost necessary that the trial test be administered at the end of the term, concurrently with the derivation of the criterion. If the test, in a study such as this one, were given at the beginning of the semester, it would be necessary to wait until the end of the semester

for the development of the criterion. This would not only result in a serious loss of time but, more important, it would introduce the fallacy of ignoring the effect of the instruction and of any other pertinent experience during the term. This study should therefore be considered a study in concurrent measurement rather than a study in prediction in the strict sense of the word, and it should be emphasized that the purpose is to measure ability, or potential, rather than performance.

A preliminary trial at the University of Oklahoma in May, 1956--the trial upon which the first revision, or Second Edition, was based -- indicated that the semester grade was not a suitable criterion chiefly because the instructors penalized students for failure to submit the required number of themes or for failure to revise them as instructed or for some other failure that had little to do with the ability to write. An extreme case was that of the student who scored by far the highest in the tests. semester grade was C. The instructor, upon being questioned. stated that this student, when he wished, wrote themes that were uniformly of the highest quality but that all too often he submitted his themes late or not at all. He undoubtedly had great writing ability, the instructor stated, but he was simply a poor performer. Several other instructors, upon being questioned, stated that in some cases in which the semester grades were higher than the

test scores indicated that the grade should be, the student had been given the high grade because he had tried hard or because he had made great progress during the semester, although, admittedly, he was still a poor writer. Such factors, of course, tend to invalidate the semester grade as a criterion.

Moreover, it may be reasoned that since the student never sees the estimate and since it has no effect upon the semester grade, the use of the estimate as the criterion tends to free the instructor from qualms and doubts and fears of offending the student or of being unjust to him. The estimate of performance in writing ability is therefore likely to be the more accurate criterion.

Construction and Administration of the Tests

Three tests were constructed: (1) reading comprehension, (2) grammar, usage, and structure (abbreviated and hereafter referred to as GUS), and (3) vocabulary. Each test was revised twice, each revision following a trial run at the University of Oklahoma. The original test and the two revisions are hereafter referred to as the first, second, and third editions, respectively. During the construction of the first and second editions, consultations were held with several members of the English Department at the University of Oklahoma regarding the plan in general and the suitability of the items in particular. From these consultations a great deal of constructive criticism and

many valuable suggestions were received. All tests in all editions were designed so that the answers could be marked on a standard I.B.M. answer sheet and the tests therefore could be scored by machine. Design, administration, and revision of each test is described below.

The First Edition

Reading comprehension. The reading comprehension test was composed of 58 four-choice items based on 20 texts chosen from the fields of history, literature, science, language, education, and from newspapers in order to sample various fields of interest and various levels of difficulty. The time allotted for administration was 50 minutes. The items covered a wide range of matters including, among others:

- 1. Recognition of the main thought in a complex sentence.
- 2. Meaning in sentences employing restrictive or non-restrictive clauses,
- 3. Meaning involved in the use of the subjunctive mood,
- 4. Recognition of parallel ideas from parallel structure,
 - 5. Meaning of idioms,
 - 6. Analysis of four-term analogies,
- 7. Reference of pronouns and pronoun-noun combinations,
 - 8. Differentiation between principle and example,

- 9. Derivation of the meanings of strange words from the context,
 - 10. Inferences,
 - 11. Detection of simple error in logic,
 - 12. Method of paragraph development,
 - 13. Purpose of a paragraph,
 - 14. Understanding of an argument,
 - 15. Understanding of figurative language,
 - 16. Central idea of a paragraph.

GUS. The GUS test was composed of 130 two-choice items designed to cover the difficulties usually comprehended by composition teachers under the terms grammar, syntax, accidence, usage, diction, structure, logic of expression, mechanics, and the like. The time allotted for administration was 50 minutes. The items, for the most part, employed single sentences or expressions, and the students were directed to mark each item simply "acceptable" or "not acceptable." Care was taken to avoid the inclusion of any item about which there could be disagreement among teachers. The ratio of acceptable items to not-acceptable items was approximately one to one.

In general, each unacceptable item was paired with an acceptable item by the fact that both items involved the same problem—for example, the tense of the infinitive.

The two items always involved different subject matter and usually sentences of different length. The paired items

were not placed together, but were separated at random intervals throughout the test so that no pattern could be apparent by which the mates might be identified. There were a few cases of triplets and a few cases of items that were not paired with anything.

<u>Vocabulary</u>. The vocabulary test was composed of 100 fivechoice items in which the students were directed to select
synonyms or synonymous expressions. No use was made of
"word counts" or "frequency counts" because (1) it was noted
that those in existence failed to include many words then
in common use and it was concluded therefore that they were
-too far out of date, (2) the meanings of some words had
changed since the counts had been made, new connotations
- had developed, and many words had gone out of style, and
(3) there appeared to be no way to determine the frequency
range from which to choose words appropriate to the level
for which the test was intended.

In May, 1956, these tests were administered to approximately 250 freshman students in English composition at the University of Oklahoma by their instructors, who had volunteered for the project. Under the circumstances it was impossible to choose the sections so as to be assured of a representative sample. The sample did include among the 12 sections, however, one high section and one low section. Several sections failed to take all three tests, and in one or two sections it appeared that the tests had

not been administered under standard conditions.

It had been planned to correlate test scores with semester grades, but the plan was abandoned because it was discovered that in many cases the semester grade had been affected by factors extraneous to writing ability, as discussed previously under <u>Establishment of the Criterion</u>, and that such correlation would be of little value in the study. A comparison of the scores of each test with semester grades, however, did indicate a degree of agreement that was encouraging.

The Second Edition

In spite of the failures noted above, this first pilot run did provide enough information to permit a rough revision of the tests. The failure of a large number of students to reach the end of the reading comprehension test showed that the test was too long for the fifty-minute period allotted; and the reports from the instructors, that all of their students had completed both the GUS test and the vocabulary test long before the end of the fifty-minute period allotted to each, indicated either that these tests were too short or that the time allotment was too great. Moreover, a count of "right" and "wrong" answers showed that some items were much too difficult and some were much too easy. Because it is desirable to keep the time required for testing as short as may be consistent with reliability, in order to attract potential users of a test, it was decided to reduce the time allotment for the GUS and the vocabulary tests so that the two could be given in one fifty-minute class period and to revise the tests to fit into this time allotment. The number of items that were either very difficult or very easy suggested that the tests could be shortened by the elimination of these items without seriously affecting the reliability of the tests. The revision of each test is discussed below under the appropriate heading.

Reading comprehension. The number of items in the reading comprehension test was reduced from 58 to 54 by the elimination of two items which the count of correct and incorrect responses indicated to be much too difficult, and the elimination of two items which the count indicated to be much too easy. Minor changes were made in a few of the texts and in a few of the response choices in an effort to bring them nearer to the mid-range of difficulty as indicated by the response count. The time allotment was kept at 50 minutes.

GUS. The number of items in the GUS test was reduced from 130 to 120 on the basis of difficulty as indicated by the response count. Here five items, with their mates, were eliminated because they were too difficult, and three items with their mates, because they were too easy. Three new pairs were added to bring the total up to 90. The time allotment was reduced to 30 minutes.

<u>Vocabulary</u>. The number of items in the vocabulary test was reduced from 100 to 50 by including only the fifty in the mid-range of difficulty as indicated by the response count. The allotted time was reduced to 20 minutes.

At the end of the spring semester of 1957 these tests (second edition) were administered to 325 students at the University of Oklahoma by freshman composition instructors who volunteered for the project. Again, one instructor failed to observe standard conditions, and the scores of his students were rejected. Of the 279 remaining subjects, 59 were lost because they failed to take all the This time the instructors had been asked to submit their estimates of the writing ability of their students, but only five of them responded, including the one whose students had to be rejected. Again a comparison of the scores of single tests with the criterion suggested an encouraging degree of agreement, but the number of cases for which the criterion had been supplied (109) was too small to yield reliable results. Moreover, with only four instructors supplying estimates that could be used, it seemed that the reliability of the criterion was questionable.

The Third Edition

The trial run described above did, however, provide sufficient data for an item analysis to determine the indices of discrimination and of difficulty. The method de-

scribed by Davis was followed for the reading comprehension and the vocabulary tests and yielded the results shown in Table 1. Time did not permit the use of this method in the case of the GUS test, with its total of 120 items, because the interval between the authorization of the testing at the University of Hawaii and the date required for the administration of the tests was quite short and the revision had to be made quickly. Only a count of the correct responses to each item was made, therefore, and the items which the count showed clearly to be too difficult or too easy were either eliminated or revised. The revision of each test is discussed below under the appropriate headings.

Reading comprehension. Items with a discrimination index below 20 or with a difficulty index below 20 or above 80 were either eliminated or revised. There were 12 items with a discrimination index below 20 and there was one item with a difficulty index below 20. Of these 13 items one was retained, eight were eliminated, and four were revised. Two new items were added to bring the new total to 48 instead of the old number of 54. The time allotment was kept at 50 minutes.

Davis, F. B. (1946) Item Analysis Data: Their Computation, Interpretation, and Use in Test Construction. Harvard University Papers, No. 2. Cambridge, Mass.: Graduate School of Education, Harvard University.

There was one exception. Item 47 in the second edition (item 40 in the third edition) was retained

TABLE 1

ITEM DISCRIMINATION AND DIFFICULTY INDICES FOR READING COMPREHENSION AND VOCABULARY TESTS (SECOND EDITION) FOR STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF OKLAHOMA, MAY, 1957

N = 229

Reading Comprehension							Vocabulary					
Item 123456789011234567890122345678901234567890122345678901222222222222222222222222222222222222	Dis 140974902302246668593444333927	Diff. 51 772 616 993 492 662 337 700 420 30 30	Ite89012345678901234444444555555555555555555555555555555	Dis 309538401892180641472183814	Diff. 11 226948126572685897965216626 452445473314724 32425536		It 12345678901234567890123456789012345678901234567890123456	a diff	344343336436456324981.759127y		2313435433541635427730859411 23134354332332143265725328 sm	Diff. 334 334 349 354 354 354 354 355 364 375 375 375 375 375 375 375 375 375 375

GUS. The number of items was reduced from 120 to 102 by the elimination of 12 items which the response count indicated to be too difficult or too easy. To preserve the system of paired items it was necessary to eliminate the items that were the complements, or mates, of the items that had been eliminated. This reduced the total number of items to 86. Two new pairs of items were added to bring the final total number of items to 90. The time allotment was set at 30 minutes.

<u>Vocabulary</u>. As in the case of the reading comprehension test, items with a discrimination index below 20 or with a difficulty index below 20 or above 80 were either replaced or revised. There were four items with discrimination indices below 20, and these items were replaced by new items. Item 16, with discrimination index of 22 and difficulty index of 14 was revised by a change in the response choices.

Finally, this last revision (third edition) of the tests was administered, at the end of the first semester, in January, 1960, to 515 students (out of about 1,500) enrolled in the freshmen composition classes at the Univer-

deliberately because theoretically it should be an excellent item, and it was desired to see whether a second and larger sample would still yield poor indices of discrimination and difficulty. The Hawaii experiment did show that it is useless as a test item and that students searching for answers do not read carefully. The text of this item contains a logical contradiction, and the first clue, if taken alone, leads to a wrong response.

sity of Hawaii. It is upon the results of this testing that the final results of this study are based.

The testing required two periods of 50 minutes each, and the periods were those on the regular class schedule. This means, for example, that if a class met regularly on Monday, Wednesday, and Friday at 8:00 A.M., the first testing session would be on Monday at 8:00 o'clock, and the second on Wednesday at the same hour. Thus the tests were administered to the students by their regular instructors, in their regular rooms, at their regular class hours. Because some students were absent from one testing session or the other, the number of complete cases, and therefore usable cases, was reduced from 515 to 449. The same order of test administration was followed in all classes—reading comprehension during the first testing period, GUS during the first 30 minutes of the second testing period, and vocabulary during the last 20 minutes.

Effort was made to insure that the sample would be as nearly representative as possible of the total population of freshmen at the University of Hawaii. This was done by selecting class sections from among the high, high middle, middle, low middle, and low sections so that the distribution, within the limits imposed by the necessity of taking all of a class or none, would be nearly normal or representative. The students had been assigned to sections at the various levels at the beginning of the school year on

American Council on Education Test and the reading comprehension, analogies, and vocabulary sections of the Ohio State Psychological Examination, or upon the results of their College Entrance Examination Board examination, or both. For the most part, the instructors volunteered their classes and themselves. In a few cases, where it was necessary to secure a class of the proper level, the persuasion of the chairman of the English Department was effective. It was stipulated, however, that no instructor should be required to participate in the program against his will, since such forcing would probably bias his estimate.

The students involved, then, may be considered to constitute a reasonably representative sample. Among them were nineteen foreign students variously from Tanganyika, Guam, Yap, Free China, Japan, and Germany. A few were from the continental United States. A few were mature persons. No usable case, however, was eliminated for any reason.

Precautions were taken to insure that no test left the rooms or fell into the hands of students who had not yet taken the tests. Careful instructions were given to all instructors to insure that the tests were administered under conditions as nearly standard as possible. Control and discipline were excellent.

Twelve instructors, with a total of 19 class sections, were involved in the testing program. At the time

the tests were administered these instructors were asked to submit their estimate of the writing ability of each of their students according to the 12-point scale shown below. These letter grades were converted to the numbers shown in the parentheses in order to permit correlation of letter grades with number grades.

A	(12)	C	(6)
A	(11)	C-	(5)
B+	(10)	D+	(4)
В	(9)	D	(3)
B-	(8)	D-	(2)
C+	(7)	Ŧ	(1)

These estimates on this scale constitute the criterion. The instructors, of course, had no access to the test scores until after all had submitted their estimates.

Scoring

An analysis was made to determine the effect of correcting the scores for guessing. The procedure was taken in three steps, as follows:

1. The first step here was to convert all raw scores to z-scores and average the z-scores for each student. The next, to convert these average z-scores to scores on the 12-point scale by considering +1.5, +.5, -.5, and -1.5 as the dividing points between the A's, B's, C's, D's, and F's respectively. Each standard deviation, except those corresponding to the grades of A and F, was divided

into thirds to determine the plus, middle, and minus ranges. The A- range was set between 1.5 and 1.833, and all z-scores over 1.833 were considered simply A's.

- 2. The raw scores were then corrected for guessing by the use of the formula $S = R \frac{W}{n-1}$ in which S is the corrected score; R, the number of right answers; W, the number of wrong answers; and n, the number of choices per item. There were relatively few omissions. These corrected scores were converted to z-scores and averaged, and the averages converted to scores on the 12-point scale in the same manner as described above for the uncorrected raw scores.
- 3. Finally the deviation of each score from the criterion score was obtained for both sets of scores (i.e., for the uncorrected scores and the corrected scores) and the average deviation, in each case, found by averaging each group of deviations, without regard to sign.

The analysis showed that the correction for guessing lowered the average deviation from 1.52 (points on the 12-point scale) for the uncorrected scores to 1.50 for the corrected scores. This small gain of 0.02 in favor of the corrected scores was considered negligible. It was considered, moreover, that since users of the tests certainly would not take the trouble to correct the scores for guessing in order to gain so little and that since they therefore would want to know the performance of the tests with-

out such correction, the correction for guessing was rejected, and the scores were marked simply as the number right.

CHAPTER III

CORRELATIONAL ANALYSIS AND INTERPRETATION

The coefficients of correlation were calculated by the computer laboratory at the University of Hawaii, and the results are shown in Table 2. The raw scores of four standardized tests which had been used for admission and placement at the University of Hawaii were available for 403 cases of the total of 449. These tests were (1) the ACE test in linguistics, (2) the OSP vocabulary test, (3) the OSP analogies test, and (4) the OSP reading comprehen-The intercorrelations among the raw scores of these four tests, the raw scores of the tests that had been designed for this study, and the criterion scores (the estimates of the instructors) were obtained. sults are shown in Table 2. All values shown in this table were found to be significant at the 0.05 level. Since all values of r were positive and significant the presence of a common ability factor may be assumed.

The submatrix of intercorrelation (the correlation among variables 1, 2, 3, and the criterion) along with the multiple R among these variables, may be seen in Table 2.

TABLE 2 MATRIX OF INTERCORRELATIONS OF TEST SCORESa

		(N = 4	49)			(N =	= 403)	
	1	2	3	C	5	. 6	. 7	8
1		.509	.626	.589	.570	.514	• 504	.588
2			.521	.522	.497	•455	.498	.441
3				•599	.723	.729	.550	.589
C					. •555	•533	.510	.516
5					*	.713	.486	.606
6							.661	.695
7								.656
8		-						

Variable 1 is the reading comprehension test.

Variable 2 is the GUS test. Variable 3 is the vocabulary test. Variable C is criterion.

Variable C is criterion.

Variable 5 is the ACE linguistics test.

Variable 6 is the OSP test (vocabulary).

Variable 7 is the OSP test (analogies).

Variable 8 is the OSP test (reading comprehension).

Multiple R = .699 for Intercorrelation Matrix.

Multiple R = .679 for Intercorrelation Submatrix (Variables 1, 2, 3, and C).

^aAll correlations are significant beyond the 0.05 level.

The multiple R of 0.679, obtained from the four variables indicates that 46.104 per cent of the variance in the criterion can be attributed to variations in the group of the three independent variables. If interpretation is made by way of the coefficient of alienation $(K = \sqrt{1-r^2})$, K is found to be 0.73. In this case the 0.73 indicates that the error of estimate in predicting teacher estimates of grades from the test scores would be relatively large.

The multiple R of 0.699, obtained from all variables in Table 2, indicates that 48.86 per cent of the variance of the criterion can be attributed to variation in the group of seven independent variables. This multiple R of 0.699 yields a K of 0.72 as the coefficient of alienation. Again, the K of 0.72 indicates that the error of estimate in predicting teacher estimates would be relatively large. suggests that neither the obtained scores of the three tests nor the scores of all seven tests would be highly satisfactory for estimating the criterion scores from the test results. It should be pointed out, however, that these multiple R's and these coefficients of alienation point toward the precise prediction of one point in the 12point scale. They do not indicate how close the prediction may be in those cases where the prediction is not precisely to one point. For the purpose of admission to college the difference between mid-score and a plus or minus score, or even a greater difference, would usually not be

considered crucial.

Table 3 was prepared, therefore, to show the actual number, extent, and direction of the deviations of the composite of the scores of the tests that had been designed The method of for the study from the criterion scores. arriving at the composite of the test scores is the same as that employed in the analysis of the effect of correcting the test scores for guessing, as explained earlier. In the table, the numbers in the headings to the right of the O indicate the number of points, on the 12-point scale, by which the grade derived from test score of each case in the column exceeds the criterion score. Numbers to the left of zero indicate the number of points by which the grade derived from the test scores falls below the criterion From the table it may be seen that in 108 cases out of the total of 449 (24.052 per cent) there was precise agreement between the composite test score and the criterion score. The table shows, moreover, that 409 cases out of the total of 449 (over 91 per cent) agreed within an error of three points, plus or minus, or, that is to say, within an error of one letter grade.

TABLE 3

DISTRIBUTION OF VARIATIONS OF COMPOSITES OF SCORES OF TESTS DESIGNED FOR THE STUDY FROM CRITERION SCORES, FOR STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF HAWAII AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

(N = 499)

Instructor -9 -8 -7 -	5 -5 -4	1 -3	-2	-1	0	1	2	3	4	5	6	7	8	9 Total
A Class 1		1 2		4	5	3	5	ļ	2			7		19 22 29
Class 2		2	2	1 6	4 11	7	3	נ	2			1		22
B Class 1			2	0		0		Ť	2	7				29 07
C Class 1	-		Т.	3	3	کے	3	3 1 5 2	2	Т				21
Class 2	1]	L 4 L 2	-7	4	Ō	0	3 4 2	2						21
D Class 1 1	1 1		7	3 4	2	2	2	7	2					27
Class 2		1	2		9	7	٦	l	2	1				2E 2T
E Class 1	2]	4	٦	7 3	05932482	3 5 2 4 4	1	2	1	٦.				21 25 18
F Class 1	2]	L	<u> </u>	2	7	4	2 2	2	1					10
G Class 1		3 1	<u> </u>	2	4 2	2	2	4						3.1 T.T.
H Class 1 Class 2	1 -) T	4 8	2 5	9	2		1 2 1 1						11 21 23 24 26 26
Class 2 I Class l	т -	1 1	2	7	10	1	3	7	٦					21
J Class 1	-	ات علا ا	2	18	10 8	<u>ተ</u> 5	ر 1	i	4					26
Class 2	=	. 7	2	a	7	3	1 2							26
K Class 1	1 3	L 1 L 2	2 2 3 6	9 7	5	2	2							21
Class 2	_L _L		U		ıó	5	2	1						22
Class 3	<u>ب</u>	2	1	2	5	ર્વ		2						22
Class 4		2 L 3	4 2	3 2 3	5 0	224532532	4 2	-						24 22 22 13
L Class 1 1	=	1		í	6		2	. 2	٦	1				16
Class 2	` -	L 1		2	6 1	1	5	3	1 2	_				16 18
			. 0			_	-	_		_				
Total 1 1 1	5 14	29	48	78	108	69	45	32	14	3		1.		449
Percentage $\%$ $\%$ $\%$	4 8		069	371	052	99	022	56	8	899		223		
	4 5	4	9	ώ.	,O	ň	õ	12	ij.	9		22		·
Variation	ન . ઌ	, 6	9	2	24.	5.	2	<u>`</u>	m	-		-		

CHAPTER IV

ITEM ANALYSIS AND INTERPRETATION

The data required for item analysis are presented in the Appendix. For each test the cases are grouped under the criterion scores A, B, C, D, and F. The case number of each student is derived from his relative standing in the reading comprehension test, without, however, any regard for alphabetical arrangement of students making the same score. The number 1 in a cell indicates that the student gave a wrong response to the item in question. The letter O indicates that the item was omitted. A blank cell indicates that the student gave a correct response to the item.

Reliability

The reliability indices and the coefficient of reliability of each test were computed by the method described by Gulliksen. 7

These are presented for the reading comprehension test, the GUS test, and the vocabulary test in Tables 4, 5,

⁷Gulliksen, Harold, Theory of Mental Tests. (New York: John Wiley & Sons, Inc., 1950), pp. 378-380.

and 6, respectively. The item variances of individual items appear in Tables 7, 8, and 9.

The coefficients of reliability indicate the need for the revision of some items, particularly in the <u>Reading Comprehension Test</u> and in the <u>GUS Test</u>. Inspection of Tables 4, 5, and 6 reveals the presence of a few items with very low reliability indices and others with relatively low reliability indices. The replacement or revision of these items should materially increase the coefficient of reliability of each of the three tests. Theoretically this improvement in reliability should increase the multiple R.

A major factor limiting the increase of the multiple R, however, is the skewness of criterion curve, with its distribution of 19 A's, 114 B's, 215 C's, 62 D's, and 39 In a very large sample most of this skewness might be expected to disappear. If the criterion curve of the entire population should approach normality, wherein the instructors could make their estimates or assign grades more accurately and wherein the underlying assumptions of multiple correlation could be more adequately met, a higher multiple R could be expected. In turn a higher degree of prediction would result. In other words it is quite possible that the tests may do a better job of measuring the writing ability of college students than the results of this study indicate -- or that the tests may provide a more accurate measurement of this ability than do the estimates of the particular instructors involved in this study.

TABLE 4

RELIABILITY INDICES FOR READING COMPREHENSION TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

					
Item 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	.11938 .01650 .09380 .10570 .13369 .13589 .13636 .07644 .05560 .02107 .10409 .15460 .17544 .13702 .07597 .14352 .15126 .11201 .10158 .09197 .17860 .08397 .18993 .15547		Item 256 278 290 333 334 56 78 90 42 34 44 56 47 48	.15920 .10629 .15817 .17182 .14686 .17493 .13589 .14664 .17058 .07090 .17347 .08316 .12208 .109956 .109956 .00298 .10972 .16479 .04826 .18705 .22384 .16262 .09650 .15100	-

TABLE 5

RELIABILITY INDICES FOR GUS TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

Item	Item	Item
1 .12752 2 .08394 3 .00841 4 .01562 5 .05647 6 .04481 7 .15690 8 .09965 9 .00816 10 .04852 11 .07088 12 .04428 13 .06112 16 .04166 17 .15560 18 .14832 19 .01045 20 .01020 21 .07177 22 .12079 23 .01562 24 .09733 25 .06569 26 .10112 27 .09048 28 .01950 29 .02433 30 .03726	31 .10285 .08854 .32 .08854 .33 .02515 .34 .05800 .35 .05925 .37 .03107 .38 .07043 .39 .08848 .40 .10637 .41 .116606 .42 .09860 .43 .10957 .45 .03488 .47 .03488 .47 .03488 .47 .03488 .49 .10115 .10600 .10690 .165422 .13429 .51 .07680 .13087 .05626 .13087 .05626 .00516	61 .08731 62 .09132 63 .19705 64 .09932 65 .15778 66 .11522 67 .06427 68 .12269 69 .15445 70 .09634 71 .05264 72 .16765 73 .06508 74 .16470 75 .10710 76 .15939 77 .14172 78 .08653 79 .14172 78 .00177 82 .20555 83 .05114 84 .21010 85 .13012 86 .17261 87 .16867 88 .14837 89 .20160 90 .16515

TABLE 6

RELIABILITY INDICES BY ITEM FOR VOCABULARY TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

(N = 499)

It	5em	Item	
]] 2 2 2	1 .20245 2 .10068 3 .21410 4 .20101 5 .12971 6 .20933 7 .12409 8 .13713 .23246 .0 .15664 .1 .4790 .2 .14834 .2 .23110 .1 .2950 .1 .20038 .1	2678901233456789012344567890 242233333333334424444444567890	.16059 .20452 .10373 .15708 .22308 .25938 .24582 .17083 .14569 .06015 .22732 .21906 .05280 .11612 .24333 .22616 .17505 .16416 .25205 .26022 .24403 .19796 .20381 .1188 .24078

TABLE 7

ITEM VARIANCES OF INDIVIDUAL ITEMS IN READING COMPREHENSION TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960 (N = 449)

	· · · · · · · · · · · · · · · · · · ·	 	
Item		Item	
1 3 4 5 6 7 8 9 0 1 1 2 1 3 1 4 1 5 6 1 7 1 8 9 0 2 1 2 2 2 2 2 2 3 2 2 2 2 2 2 2 2 2 2 2	.2460 .1075 .1792 .1743 .1815 .2246 .15830 .02383 .24778 .223478 .223478 .22383 .2478 .29990 .09937 .2492 .2492	25 26 27 29 31 33 34 56 78 39 41 44 44 44 44 44 44 44 44 44 44 44 44	.2137 .2246 .2210 .2397 .1603 .2454 .2454 .2456 .1616 .2111 .2460 .1668 .2485 .1989 .2368 .1406 .2402 .1238 .2402 .1238 .2437 .2437 .2655 .2028

TABLE 8

ITEM VARIANCES OF INDIVIDUAL ITEMS IN GUS TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

Item		Item		Item	
123456789012345678901234567890	.2486 .13270 .23624 .23564 .23564 .243394 .24979 .24868 .235721 .24975	33345678901234567890123456789 555555555555555555555555555555555555	1685 10979418 10979418 1198403	61 63 64 65 66 67 67 77 77 77 77 78 81 81 88 88 88 89 90	.2451 .1521 .1529 .1270 .1916 .2498 .2498 .1158 .24939 .1158 .24939 .1247 .12820 .12820 .12820 .12820 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .128300 .12

TABLE 9

ITEM VARIANCES OF INDIVIDUAL ITEMS IN VOCABULARY TEST FOR STUDENTS IN FRESHMAN COMPOSITION, UNIVERSITY OF HAWAII, AT THE END OF THE FIRST SEMESTER, JANUARY, 1960

		 	
Item		Item	
123456789012314567890122345	.2186 .1521 .2497 .2495 .1300 .2498 .2477 .1872 .2483 .2212 .2460 .12460 .12490 .1969 .1371 .1803 .2376 .1743 .1803 .2393 .2394	6789012345678901234567890 2223333333333444444444 445	.2488 .2486 .2383 .2170 .2492 .2434 .2430 .2146 .2146 .2129 .2458 .2469

The coefficients of reliability for each of the three tests are as follows:

1. Reading Comprehension, r = 0.7534

$$\sum_{x_g} r_{xg} = 6.01113 \qquad \sum_{g} s^2 = 9.4785$$

$$r_{xx} = \left[\frac{K}{K-1}\right] \left[1 - \frac{s^2 g}{(r_{xg} s_g)^2}\right] = \left[\frac{48}{47}\right] \left[1 - \frac{9.4785}{6.0113^2}\right] = .7534$$

2. GUS Test, r = 0.7453

$$\sum r_{xg} s_g = 7.94939$$
 $\sum s_g^2 = 16.6184$

$$r_{xx} = \left[\frac{90}{89}\right] \left[1 - \frac{16.6184}{7.94939^2}\right] = .74530$$

3. Vocabulary Test, r = 0.8741

$$\sum r_{xg}s_g = 8.46447$$
 $\sum s^2_g = 10.2742$ $= \left[\frac{50}{49}\right] \left[1 - \frac{10.2742}{8.464472}\right] = .87408$

Validity

Since the underlying assumptions of linearity and homoscedasticity for zero order correlation could not be met, the Olmstead and Tukey non-parametric test for peripheral association was used to determine the relationship between test scores and teachers' estimates of writing ability. The paired observations on the two variables were plotted as a scatter diagram where the median of the variables were plotted to form the x and y axes to form the four quadrants. The number of observations which appeared in the respective quadrants before they crossed the median axes were recorded and the Quadrant Sum obtained. The standard deviate of the Quadrant Sum was determined by the formula:

$$\frac{\left| s_{n} \right| - 1/2}{\sqrt{12 r}}$$

where $S_n=$ Quadrant Sum and r= the dimensions, in this case four quadrants. ⁹ The probability of the Quadrant Sum was determined by the table of normal curve. An evaluation was made in terms of the null hypothesis (no association = independence) where no association existed between test scores and teachers' estimates of writing ability for each

Paul S. Olmstead and John W. Tukey. "A Corner Test for Association," <u>Annals of Mathematical Statistics</u>, 1947, 18, pp. 495-513.

^{9&}lt;sub>Ibid</sub>.

TABLE 10

THE OLMSTEAD AND TUKEY PERIPHERAL ASSOCIATION BY TEST

Reading Comprehension Test							
Individual Terms	Quadrant Sum						
Top = 8 Right = 19 1/2 Bottom = 18 1/2 Left = 0 46	S = 46 z = 6.59 P < 0.01						
GUS Test	·						
Individual Terms	Quadrant Sum						
Top = 8 1/2 Right = 14 Bottom = 13 1/2 Left = 3 39	S = 39 z = 5.58 P < 0.01						
Vocabulary T	est						
Individual Terms	Quadrant Sum						
Top = $7 \frac{1}{2}$ Right = $5 \frac{1}{2}$ Bottom = 10 Left = $\frac{3 \frac{1}{2}}{26 \frac{1}{2}}$	S = 26 1/2 z = 3.77 P < 0.01						

respective test. The individual terms found in each quadrant, the Quadrant Sum, and the significance levels are presented in Table 10. For each of the three tests of writing ability the distribution of Quadrant Sums exceeded the 0.01 level of significance; therefore, the null hypothesis of no association was rejected. This statistically significant association of peripheral points indicated that a relationship does exist between teachers' estimates of writing ability and scores obtained on the three tests of writing ability.

Discussion of the Results

Whether the three tests developed for this study constitute a useful instrument for the purpose for which they were intended depends upon the interpretation of the value of the multiple R of 0.679, of the value of a coefficient of alienation of 0.73, and upon the acceptance or rejection of the criterion. From a purely statistical point of view, the standard error of estimate that would follow from the coefficient of alienation might seem too large to indicate a high degree of usefulness. Still, an instrument that shows agreement within a variation of not more than one letter grade in 91 per cent of the cases seems to offer a comparatively high degree of usefulness.

The multiple R of 0.679 seems to indicate the general soundness of the theory of measuring the degree of excellence of the writing of college freshmen by means of

objective-type, machine-scorable tests in reading comprehension, GUS, and vocabulary. This is especially true in view of the probability that the multiple R is not higher than it is because of the considerable skewness in the criterion distribution and the possibility that the tests may have measured writing ability with more accuracy than the instructors estimated it. The presence of a number of items with low item reliability indices in each of the tests suggests that the coefficients of reliability can be raised without great difficulty by a revision of these items. Such revision should increase the value of the multiple R.

Criterion. The considerable skewness of the curve of the criterion scores is probably attributable to sampling error. The use of a much larger number of instructors and the inclusion of only one class from each instructor should, theoretically, bring the distribution of criterion much nearer to the normal.

Reading comprehension. A serious fault of the reading comprehension test is that in it no attempt is made to cover the relations that exist among the thoughts in a relatively long text—among, that is to say, not only the thoughts in a paragraph but also among the thoughts from paragraph to paragraph or even among larger divisions. This matter is usually comprehended under the expression "organ—

ization of ideas" or "analysis of ideas." A good reader must observe the patterns, that is to say, or the principles of organization that were followed in the construction of paragraphs, sections, and whole texts. Such a test would be difficult to construct, and unless great pains were taken the test might prove too difficult for readers at freshman-college level. The greatest objection to the use of such a test, however, is that it would require a text of considerable length, and the time required for a student to complete the test would be prohibitive.

GUS. The GUS test suffers from the weakness that is inherent in most two-choice tests. Item reliability is likely to be low and a large number of items required to build up the total test reliability. It is commonly believed that the number of items calling for a "right" response should be approximately equal to the number of items calling for a "wrong" response. There is a notable tendency, however, for items calling for a "right" response to be answered "right" more frequently than for items calling for a "wrong" response to be answered "wrong." The result is that items calling for a "right" response tend to discriminate poorly and to have a low index of reliability. tendency is noted in the GUS test among some of the paired There are 42 items (out of 90) which call for a "right" response and many of these were employed in order to provide mates for those calling for a "wrong" response.

Most of these seem to discriminate rather poorly and to have low reliability indices. Generally speaking, only those "right-response" items that involve sophisticated constructions seem to have any considerable discriminating power, and many of these are apparently too difficult.

It is believed that the test may be improved considerably by the elimination of a number of the "right-response" items and their replacement by "wrong-response" items, despite the widely held theory of balance. A ratio as low as 35 "right-response" items to 55 "wrong-response" items is suggested, or even 30 to 60. An alternative, if approximate balance is to be maintained, would be to replace some of the poor "right-response" items with other "right-response" items involving somewhat sophisticated constructions, but great care would have to be taken lest the construction be too difficult and wild guessing be the result. Generally speaking, students seem to mark "wrong" any constructions that they have not met before and to mark "right" any construction that they meet often, regardless of how "wrong" it may be.

<u>Vocabulary</u>. The vocabulary test has the highest reliability coefficient of the three tests and seems to have no serious faults beyond the fact that it has some five items with low reliability indices. These items should be revised or replaced.

- CHAPTER V

DISCUSSION OF THE RESULTS

The raw scores of individuals were arranged in descending order from high to low scores along with the frequency count of scores for each test and for the total score. The frequencies were accumulated from the lower end of the distribution upward. In turn, each cumulative frequency was divided by the total number in the distribution in order to obtain the cumulative per cents. The per cents were converted to T scores by use of a conversion table presented by Cronbach. 10 The test norms for the Hawaii group are presented for the Reading Comprehension, GUS, Vocabulary, and Total Scores in Tables 11, 12, 13, and 14 respectively. The tables of norms show the median, lower quartile, and upper quartile scores for the various distributions.

¹⁰Cronbach, Lee J., Essentials of Psychological Testing, second edition. (New York: Harper & Brothers, 1960), p. 85.

TABLE 11 INDIVIDUAL SCORE NORMS OF READING COMPREHENSION TEST FOR STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF HAWAII, END OF THE FIRST SEMESTER, JANUARY, 1960

(N	=	449	١
١.	7.1	_	・ササン・	ı

Raw Score	Per cent	T Score	Raw Score	Per cent	T Score
43 42 40 38 36 54 33 33 30 20 20 20 20 20 20 20 20 20 20 20 20 20	99.78 99.78 99.78 99.78 99.80 99.80 99.80 99.31 99.31 99.31 99.31 99.31 99.31 99.31 99.31 99.31 99.31 99.31 99.31	80 77 77 77 70 86 64 64 55 55 55 55 54 55 54	24 23 22 21 20 19 18 17 16 15 14 13 12 10 98 7	39.87 33.41 28.73 24.50 18.71 13.80 7.12 3.34 2.56 6.69 6.69 6.69 6.69	47 444 43 443 33 33 32 22 22 22 22 22 22 22 22 22 22
·		Median Lower Qu	20 artile 22	2	

Upper Quartile

TABLE 12

INDIVIDUAL SCORE NORMS OF VOCABULARY TEST FOR 449 STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF HAWAII, END OF THE FIRST SEMESTER, JANUARY, 1960

(N = 449)

Raw Score	Per cent	T Score	Raw Score	Per cent	T Score
476543210987654321098765 333333333222222	991296500 991296500 991296500 991296500 991296500 991299600 9912900 9912900 991200 991200 991200 991200 991200 991200 99120 99120 99120 99120 99120 99120 99120 99120 99120	80 77 76 66 66 66 66 55 55 55 55 55 54 47 44	24 23 22 20 19 17 15 13 11 10 98 76 54 32	29.18 25.84 22.05 18.93 14.99 13.69 10.69 1.79 1.76 1.37 1.37 1.37 1.37 1.37 1.37 1.37 1.37	45 44 42 40 338 331 332 28 21 21 21 21 21 21

Median 29 Lower Quartile 23 Upper Quartile 35

TABLE 13

INDIVIDUAL SCORE NORMS OF GUS TEST FOR 449 STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF HAWAII, END OF THE FIRST SEMESTER, JANUARY, 1960

Raw Score	Per cent	T Score	Raw Score	Per cent	T Score
7777777766666666666555555	998 9999 9999 9999 9999 9999 9999 9999	80 77 77 70 86 65 53 53 53 55 55 55 55 55 55 55 55 55 55	54 532 59 44 44 44 44 43 33 33 33 33 33 33 33 33	20.71 17.03	42 41 38 36 55 33 33 33 31 31 31 32 22 22 22 22 22 22 22 22 22 22 22 22
			60 20 Juartile 54 20 Juartile 65	ļ	

TABLE 14

INDIVIDUAL SCORE NORMS FOR THE SUMS OF SCORES OF ALL THREE TESTS FOR 449 STUDENTS IN FRESHMAN COMPOSITION AT THE UNIVERSITY OF HAWAII, END OF THE FIRST SEMESTER, JANUARY, 1960

Raw Score	Per cent	T Score	Raw Score	Per cent	T Score
1166987654321098765432109876 111111111111111111111111111111111111	97733384419585560872362031516010919851 9999999999999999999999998888888777777 99999999	8000555322110988776654433332111009887766 666666666666666666666666666655555555	1000009876543210988888888887777777777668 10000999999999888888888887777777777668	2127864567459207017738697444422555555333 222222111111 2222221111111 2222222111111	444432440098888776543333333333333322222222222222222222222

59
TABLE 14--Continued

Raw Score	Per cent	T Score	Raw Score	Per cent	T Score
125 124 123 122 121 120 119 118 117 116 115 114 1110 109 108 107 106	70.15 68.59 66.81 65.25 63.91 60.80 59.46 57.20 51.00 49.66 744.20 40.53 39.64 31.84	5554443332210099887765 554443332210099887765	67 66 65 66 66 66 66 66 67 67 67 67 67 67 67 67	1.33 1.11 1.11 1.89 .89 .66 .66 .44 .44 .44	28 27 27 26 26 25 25 24 24 24 24 21
			ll Quartile 10 Quartile 12)2	

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

In an attempt to contribute to the improvement of the curriculum in English, or more specifically to the curriculum in communication, in colleges, an objective-type, machine-scorable instrument was constructed to measure the excellence of the writing of college freshmen. This instrument embodies three tests: (1) reading comprehension, (2) grammar, usage, and structure, and (3) vocabulary.

These tests were administered to a representative sampling of 515 students in freshman composition at the University of Hawaii at the end of the first semester in January, 1960. Of this sample only 449 took all three tests; therefore, this study is based upon the scores of these students.

A criterion was established in which a grade estimate by the instructor of the writing ability, or of the degree of excellence in writing, of each of his students was used. This estimate was made specifically for the purpose of this study at the time the tests were administered. Twelve instructors with 21 classes were involved.

The multiple correlation for the scores of these three tests and the criterion was calculated and found to be R=0.679. This yielded a coefficient of alienation of 0.73. Another multiple R, for seven individual test scores, i.e., three tests already mentioned and four additional standardized tests which had been administered before the beginning of the semester, and the criterion, was calculated and found to be R=0.699. The coefficient of alienation in this case was 0.72.

Coefficients of reliability, indices of item reliability, and the item variances of all tests were calculated by the method described by Gulliksen. A validity study was made, employing the corner test for association of Olmstead and Tukey. Association between writing ability and test scores was indicated in the case of each test and the null hypothesis (no association = independence) was rejected since P was less than O.Ol in each case.

Test norms based upon the sample were derived for each test and for the sums of scores for the three tests. The norms were constructed to show the percentiles and T scores.

The results of this study showed that either teachers' estimates of student grades based upon student performance on the tests were not a valid criterion, or that the Reading Comprehension Test, Grammar, Usage and Structure Test, and the Vocabulary Test, need more refinement

to measure adequately the writing ability of college freshmen. Consequently, before a recommendation toward improving instruction in English can be made, the tests developed in this study should be revised in view of the findings and administered to other and larger samples.

BIBLIOGRAPHY

BIBLIOGRAPHY

Books

- Cronbach, Lee J. Essentials of Psychological Testing, 2nd edition. New York: Harper & Bros., 1960.
- Davis, F. B. Item Analysis Data: Their Computation,
 Interpretation, and Use in Test Construction.
 Harvard University Papers, No. 2. Cambridge,
 Mass.: Graduate School of Education, Harvard
 University, 1946.
- Gulliksen, Harold. Theory of Mental Tests. New York: John Wiley & Sons, Inc., 1950.
- Olmstead, Paul S., and Tukey, John W. "A Corner Test for Association," <u>Annals of Mathematical Statistics</u>, 1947.

APPENDIX

\$ \$4\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	653	\$14 <i>448888222888888888888</i>
8	10	. 87
4	9	\$ a aa aa a aaa aa
3 4 4 4		3d dd
<i>z</i> Z	न्ते ६२	10 10 10 10 10 10 10 10 10 10 10 10 10 1
1 1 1 1 1 1	71	4
		· 4 1 1
ਬੋਜਕ ਜਜ਼ਜ਼ਜ਼ਜ਼ਜ਼ਜ਼ ਜਜ਼ਜ਼ਜ਼ਜ਼ «	2	%# ###################################
3	٠.	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	~	4
Занана йынана аналаа	N .	3 AAAA AA AAAAA A AA
4 d d d d d d d d d d d	O r	1 1 33
8	6	° не нене н
1 1 1 1 34	*	nnn n 34
% н нин н нипин	6	% н ннн ннн нннння
% A AA AA A	ន	35
å	~	4
m	18	о на напана папа О
N	16 1	32 33
	2 1	φ ત ત
EHENSICN) 28 29 30 31 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	19 U 19 15 12	1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
10 × 10 × 10 × 10 × 10 × 10 × 10 × 10 ×	ਜ •	
28 82 28 28	Ħ	25
12 T T T T T T T T T T T T T T T T T T T	7	28 28 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
27 27 24 24 24 24 24 24 24 24 24 24 24 24 24	6 7 .	27 27 1
SCORES (READING COMPREHENSION) 21 22 23 24 25 26 27 28 29 30 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	٥	B SCORES (READING COMPREHENSION) 20 21 22 23 24 25 26 27 28 29 30 1
25 25 25 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1	17	1 25 25 1
	15 15 TI	3401 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
(READ) 23 24 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	72	(AES 23 : 1
8 2	 <u>g</u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
21 22 21 22 11 1 1 1 1 1 1 1 1 1 1 1 1	17 18 19 19 19 12 18	
	6	B 3CO 119 20 21 1
< X < x < x < x < x < x < x < x < x < x	9 3	8 8
	6	i e
ä	ň	18
Н	Ä	15 16 17 1 1 1 1 1 1 1
7 1		16
7 1 1	15	भेत तत तत
12 13 14 15 16 17 18 19 1	15 18 15	7 a a
7 H H H	31	13
21	ដ	7
1 4 444 4	ង	= === === === == == == = = = = = = = =
1 10	18	94
6 1	81	6
	92	
6	χ. L	8 1
, 4 1 11	18 15 18 18	с н н н
Ф Н	7 9	9 11 11 11
	16	<i>v</i>
4 लन्न नन्नन न नन्नन्न	9	зяя п ня ненне
минни н н н н н н н н н н н	7	ממן חד או או
« на нанава павана на пава	N	0 mm
a a a ada	‡	. 44 4
\$		<i>%3338888888888888888888888888888888888</i>
_ .	æ	32388828888888888888888888888888888888
\$5888828828285555	, , , , , , , , , ,	นายการเกาะ เราะ

Case X 1 2 3 4
36 35 1 1 1
38 35 1 1 1 1
40 34 1 1 1
42 34 1 1
45 34 1 1
53 33 1 1
55 33 1 1
55 33 1 1
56 33 1 1
62 33 1 1
65 33 1 1
67 33 1 1
67 33 1 1
76 32 1 1
76 32 1 1
77 32 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
78 32 1 1
87 31 1 1
89 31 1 1
89 31 1 1 38 39 40 41 42 43 44 45 46 47 48 1 1 l ì ĩ . 1 ĭ 1 1 ī 1 1 1 1 1 .) 1 1 1 1.1 1 1 1 1 1 1 1 1 1 1 1 1) 1 1 1 1 1 1 1. 1 1 1 1 1 1 1 1 1. 1 1 1 1 1 1 1 1 1 ī 1.1 1 1 ı ī 31 1 31 1 1 31 1 1 31 1 31 1 1 1 1 1 1 1 1 91 93 96 99 1 1 1 1 1 1 1 1 1 ī 1 1 1 ī ı 1 1 1 1 1 1 30 30 30 30 īı 1 1 $\begin{array}{ccc} & 1 & 1 \\ \mathbf{1} & \mathbf{1} & 1 \end{array}$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 30 30 30 30 1 1 1 1 1 1 1 111 114 115 121 122 125 126 138 139 140 142 143 148 153 ì 3. 3. 1 1 1 1 1 1 1 1 1 1 ī 1 1 1 1 1 1 ī ī 1 1 1 1 1.1 1 1 30 1 1 1 29 1 1 1 29 1 1 1 29 1 1 1 29 1 1 1 29 1 1 1 1 29 1 1 1 1 29 1 1 1 1 29 1 1 1 1 1 1 1 1 1 1 1 1 1 1 j ī 1. 1 1 1 1 1 1 1 1 1 1 29 1 1 1 1 29 1 1 1 28 1 1 1 28 1 28 ī 1 1 1 1 1 1 1

Total

źĩ

162 28 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1
1 1 1 1 1
1
1
11 11 11 11 11 11 11 11 11 11 11 11 11
1 11 111 1111 1 111111
1 1 1 1 1 1 1 1
1 1 1 1 1 1
1 1 1 1 1 1 1 1 1
1 1 1 1
1 1 1
1 1
1
111111111111111111111111111111111111111
1
111111111111111111111111111111111111111
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1
1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 0
1 0 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 111
11 1 111111 11111 11 11 11 1 1 1 1 1 1 1
35 1 1 1 1 1 1 1 1 1 1 1
36 1111111111111 11111111 111111 11111111
37 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
38 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
39 11 1111111111 1 1 1111 1 1111 0111
401111 11111111111111111111111111111111
41 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
11 11 1 1 1 1 1001
1 1 1 1 1 1 1
1
1
1 11 11 11 11 11 11 11 11 11 11 11 11 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ot 8 2 2 8 8 8 8 2 7 7 7 7 7 7 2 2 6 2 6 2 5 5 5 5 5 2 2 4 4 4 4 4 4 2 2 2 2 1 1 1 1 1 1 1 1

74 35 96 93 109 50 58 83 90 111 70 66 91 86 105 64 105 83 62 56 53 20 87 27 15 30 75 97 110 54 90 87 106 107 100 70 50 85 73 76 34 20 38 14 78 82 55 45

g


```
94 54 44
3
47
38
33
%_
35
10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 1 1 1
```

C SCORES (READING COMPREHENSION)

```
33
444
28
27
25
ねょ
22 12
1
13 14 15 16 17 18 19 20
```

C SCORES (READING COMPREHENSION)

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 1. 1 ì 1 1 1 1 1 1 1 1 1 1 229 1 1 1 1 26 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 234 235 237 238 239 240 241 242 īīīī 1 1 1 1 1 ì ī 1 1 1 , 1 1 1. 1 1 1 1 1 ι 1 1 1 1 247 248 254 250 252 256 257 258 261 ī 1 1 1 1 1 1 1 1, 1 1 1 1.1 ī 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 268 269 270 276 277 278 279 281 1. 1 286 295 297 300 170 302 303 304 312 313 315 316 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1. 1 1 ı 1 1 1 1 1 1 1 1 1 1 l 1 J. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 23 1 1 23 23 1 23 1 22 1 1 22 1 1 22 1 1 1 1 319 320 321 323 325 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ī 1 1 ī 1 1 i 1 1

Total

C SCORES (READING COMPREHENSION)

D SCORES (READING COMPREMENSION)	
Case X 2 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 22 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 10 14 12 13 14 15 15 15 15 15 15 15	

840000 on 10 101017 340 04404 040440 ± 0 0 HOH 10 no no n ន 244444 75 0 ನ 2244 4404 84 ረ ଝ 38 32 20 15 32 37 34 2444 8 Я 64 ×なけおおおおはっ

18

22

32 47

F SCORES (READING COMPREHENSION)

Case 426 431 432 433 438 441 442 446 449	X 1 17 16 1 16 1 16 1 15 14 1 14 17	2 1 1 1 1 1	3 1 1 1 1 1 1	1 1 1 1 1	5 1 1 1	6 1 1 1	7 1 1 1 1 1	8	9 :	10 1	11. 1	21	13 1	4) 1 1	5 16 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1	1 1 1 1	1 1	21 1 1 1 1 1 1	1	23 1 1 1 1 1 1 1 1 1 1	1 1 1	1 1 1 1 1 1	1 1 1 1 1	1 1 1	1 1 1 1 1 1	1	1 1 1 1 0 1	1 1 1 0 1	1 1 1 1 0 1	1 · 1 0	1 1 1 0	1 1 0 1	0 1 1 1 1 0 1	0 1 0 1	0 1 1 1	0 1 1 0 1	0 1 1 1 1 0	0 1 1 1 0	0 0 1 1	00111101	0 0 1 0 0 1	0 0 1 0 0 0 1	0 0 1 0 0 0 1	47 0 0 1 1 0 0 0	0 1 1 0 0 0 0 0 0	Tot 17 16 16 16 15 14 14 11	, . , .
NR	2	0 6	5	9	21	16	18	26	32 :	33 <i>L</i>	. 7	, 1	4 2	6 2	3 20	21	27	30	33	6	24	7	20	22	11	23	15	22	12	12	16	27	10	17	3	22	7	12	3	12	16	8	20	14	12	7	8	779)

A SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

Case 221 3 51 13 15 7 14 69 92 21 24 82 10 48 334 203	X 78776 37773777069 698 676 66 654 660 59	1 1 1 1 1 1 1	2	1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		7 8 1 1 1 1 1 1 1	9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12	13	14 1 1 1 1 1 1	1	1 1 1 1	1 1 1		20 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2 23 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1	1	28 1 1 1 1	29 3	0 3	1	33 1 1 1 1 1 1 1 1 1 1 1 1 1	34 :	35 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	38 :	1 1	1	1 42	1	1 1 1 1 1 1 1	11111111	Sub-tota 41 37 38 36 37 37 37 37 33 36 32 33 35 28 34 27 31	
203 NR	59	12	18	15	14 A	1 1 4 9	, j	14 1	7 1	1 0 12	1 24	17	17	11 1 1 1	71	8 14	15	17	13 1	L8 1	175	18 1	6 13	18	12	17 9		.9 18	3	18	11 1	5 18	19 :	18 1	8 1	8 17	18	14	11	31	

B SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

Case 2 31 40	X 79 78 76 75	1	2	3 1	1	5	6	7	8 1 1	9	10 1	11	12	13	14 1	15	16	17	18	19	20	21 1	22	23 1	24	25	26	27 1	28	29	30	31	. 32	33	34	35 1.	36	37	38	39	40) 43	1 42	1	3 4	4 4:	Sub- 3' 4' 4'		ŋ
9	75				•	1														•				ī				1	î	-	ī			ī			-				1					1	3	7	
16	75 75				1	_				1						1					1					1					1			1		1										1	3	6	
96	75				1					1					ļ	1							1	1				1	1	,	,															,	3	?	
121 25	75 74					ļ		1				1			T						1		1	3					3	T	i			i					1								7	6	
16 96 121 25 27	74					•	1			1	1	ī								•	•		-	_		1			-		_			ī		1	1		_	1					1		3	5	
55	74	1				1	1	1		_	1	_								:	l			1		_	_		1					_		ı											3	6	
47 62	74 74	1			1	,				1		1			1	,		1						1		1	1	1			1			1												T	3		
105	74	_			•	ì		1		-					_	-		-		•	•							•	1		î			ī		1	1										3. 3.	8	٠
105 29	73			1						1		1												1		1			1		1			1							1	1		•			3	5	
128	73				ļ							1		1		į		1				1									ļ			į						1							3	6	
128 12 86	72 72	1			i	1	1			1				1	1	1		1				1	i	Ţ		Τ.				1	_			i		Τ.				1					1		3	<u>4</u>	
115 208	72	_			_	ī	_	1		_		1		_						1		ī	ī						1		1			-		1	1			_			1				á	4	
208	72	_		1		1	1	_		_					_			1			1			1					1		_	1				_				1							.3	6	
42 93	71	1				1		1		1					1			1						,		,			٠.		1	1		,		1					,					1	3	2	
8	71 70						Ţ		1	i					•									-		•			i		1		1	1	1						r				1	1	ر 3	7	
36	70					1		1	_	·-			1											1				1	1		1					1				1					1	1	<u> </u>	į.	
294	70					1		1		1		1			1						1			1			•		1		1					1									1		3	4	

A SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

Case 221 3 51 1 13 15 37 7 14 69 92 21 24 82 10 48 334 203	X 787767377377770696867666656436059	16 4	7 48	1	1 1 1	51 1 1 1 1 1	52 1 1 1 1	1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	55 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	56 5 1 1 1 1 1 1 1 1 1	57 :	1 1 1 1 1 1 1	9 666	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	63	1 1 1	1	66	1	68	69 7 1 1 1 1	70 7 1 1 1 1 1	1 7	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4 75	76	5 77	78 1 1 1 1 1 1 1 1 1 1	79 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	81 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	82 83 1 1 1 1 1 1 1 1 1	1	85 1 111 111 1	86 i	1	88 (1	90 1 1 1 1 1	Total 78 77 76 73 73 72 70 69 69 66 66 66 65 60 59	
NR	//	19 1	7 10	14	16	- 1'i	12	10 '	16 1			- 17.	17 1	<i>l</i> . 3:	- a	18	10	15	17	10	ייר	15	- ·	- 17 1	- 31	178	. 1	6 19	9 19	9 19	6	15	12	1	- 18 7	18	9	16	1A	10	16	12	1308	

B SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

Case 2	X 79	46 47 4	8 49 50	51 5	2 53 5	54 55	56	57 !	58 59	60 1	61	62 6	3 6	4 6	66	67	68	69 7	70 7	. 72	73 1	74	75 '	76 7	77 7 1	8 7	9 80	81 1	82	83	84	85	86 (1	87 1	88 8	39	90	Total 79	
	78				1												1	1		1	1						1	1										78	
31 40	76			1	_				1		1		1						1		ī		1					1					1					76	
6	78 76 75			ĩ				1													1						1	1		1							1	75	
9	75			ī				ī										1			1							1				ı					1	75	
16	75			_			1		1										1		1							1]	L		75	
96	75						ĩ		_	1							1		_		ī			•			1	ī									1	75	
121	75						-			٠.							_	1			ī				1		ĩ	ī		1			1				_	75	
25	74			3			1	1									1	_			_						ī	ī		_							1	74	
27	74			1 1			_	_		1							ī										_	ī									1	74	
	(4 01						,	,		-							-								1			ĩ		1	1					1	~	74	
55 47 62	74 74 74						т	_		,	,										,				-			ī	7	i	i	1			•	-		77.	
47	74			7						1	1							1			†							1	-	Ť	-	Ť						71.	
	(4			1			,	,										_	1		Ť							î		Ť		ī					1	71.	
105	74			٠,			÷	_													÷	,						•		-		_			-			14	
29	73		*	_ +			T	_										Ţ			Ţ	Т						7										73	
128 12	73 72			1				Ţ		1								1		T	1				7	,		Ť										73	
12	72						_	1	1	1											1						1	Ţ							- 1	L.		72	
86 115	72			_		1	1								T	1	_				_				T			Ť									Ţ	72	
115	72			1			_			_	_						1				1				_			Ť		T		Ť					1	72	
208	72			1	_		1			1	1				_		_		_		1.	_			1		_	1				Ţ					1	72	
208 42 93	71				3	L									1		1		1			1			1		1	1		_		1						71	
93	71	_		1			1	1	_	1					1		_				_	_			1			1		1		1					ı	71	
۰	70	1		1			1	1 :	1	1					1		1	_			1	1			1		_	1				_						70	
36	70		1	1 1				1										1							1		1	1				1						7 0	
294	70	1				1	1 :	1										1			1						1	1		1								70	

														В	30	ORE	,o (GIG	บาเกล	u.,	UOA	وعان	MN	ט ע	inu	0101	Œ.	•	AILI	-,																
Case	x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	3 19	20	21	22	23	24		26	27		29	30	31	32	33	34	35		37 1	7 38	39	40	41	. 42	43	44	45
17 28	69 69	3	1	1	1	1	ı			1		1		1	1				1		1			ı		1			1		1			1		1	1	1		ı						
109	69	_	-	ı	_	1				1		-			ī						1			1		1			_					1		1								,	1	,
122	69	ı				1	1	1		1.		1		1												1			1		1			1			1						1	1		1
138 209	69	1			1	ì				1				1			1									1					_			1												1
327	69				_			1	,	1	,	1											1	1					1		1			1			1		1			•				1
33	68 68				1	ì	1		1	1				1	Ţ									•					1	1				ī		_	_				٠.				1	1
53	68			_		1					,	1								1				1			1	ľ	1					1		1					1				1	1 .
79 87	68 68			Т	1	T	1	1		1	1	i								ì						1		1						î							1				_	_
89	88	1		1	,	1					1			1		1		1	1					1		1		1	1		ı			1					1						ı	1
156 193	68 68	ı	1		1	1		1		1		1		i	ı			_	1	1				î				•			ī			ī			•								1	1
246	68				1		1	1		1		1	_										,						1		1			1	1		1		1						1	
253 298	68 68	1				1				1			1	ı	1		1						1	1					1		i	1		ī			-		-						î	
335	68					1		1	_	1	1						1				,			,		,			1		1			1								,			1	
114 148	67 67	1		1			1	1	1	1				1	1	1					1			1		1			7		Τ.		1		1	1						, -			1	1
177	67			_	1	_	ī			ì				1	1			1						1					1	1				1	1	1										1
425 100	67 66					1		1	1						1				1				1	1		1			1	1	ì		1	i	_		1		1					٠.	1	-
101	66	1	1						_	1		1							1				1	1		1			1	1	1			1							1				1	1
161	66 66	,		,		1		,		1	1	1	1		1	1								1		1			1		1			1											1	
185 65	65			T		ī,						ì				_		1		1	1					_			1			ì								1						
83	65	1			1		1		1	1	1	1		ı							ı					1					1			1		1	1						1	1	1	1
90 99	65 65	1				1	1	ı				i		•					ı		î							1				_		_		1						_			ī	-
106	65	1			1	1	1	-		•		1							1	1				1			1		1		1	1				1				1		1			1	1
142 162	65 65	1			ı	1	i	1		1		7			1	1	,	1	i				1	•			i		_	1.	-					-				_					_	1
163	65				_	1	1			1				1	1					_			1	1		1					1			1											1	1
222 11	65 64				1		1		1		1			1	1	1		1		1			1	1		1					1			1		ı					1		•		î	-
23	64	ī			_	ī	1				1	_			1						1			1		1			1	1	1	1		1		1	1			1					1	1
58 102	64 64				ı	1	1.					1		1						1	1					1			1	1	1			1	1		_								1	•
111	64	1			î	1						_	1	_	1			_			_									1	ı	1		1	1	1		1								
136 140	64 64	1			1	1	1	1	1						1		7	1		1				1		1			1		1	1		1	1					ı					1	
428	64	1	1	1		1	î	i	-						1		_			_	ı			ĩ		_			1	1	1					1					1					
45	63	1	1	1		1	1	,		,		1			1			1			1					1		1	1	1	1		1	1		1	1	1	1		1			T		
104 139	63 63				1		1	1		1	1			1			1										1	-	1		ī	_	1	1		1	_	_	_		-	1		1		_
159	63					1	1			1		1					7	1	1	1	ו		1	1								1		1												T
284 272	63 63	1			1	1						1		1	1		•	_	_	_	ī			î		1			1		1	_		1			1		_		,		_			
343	63	1			1	1	1	1			1	1						1				1		ı	1			1	1			1		1					1		1		1		1	
423	63 62	1			1	1	1			1	1		1					1	1	1		l l	1	T	1		1	_					1	_		1					-		1	1	î	
125	62					1		1		1		1		,	1			1	1					1		1			1		1			1		1									1	1
146 160	62 62				1	1		1		1	1			1		1	1	1						i		_			î	1	i	1		i		•	1				1				ı	ī
						_																																								

122 138 209 327 4 33 53 79 87 89 193 246 253 298 335 114 148 177 425 100 1 ī ī 1 1 1 161 185 65 83 90 99 106 142 163 222 11 23 58 102 111 136 140 1 ı ì 1 1 1 1 104 139 159 284 1 1 . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 63 63 62 62 62 62 343 423 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 1 1 1 1 1 1 ıī 1 1 146 160 1 1 1 î î 1 1 1 1 1 1 1 1

Total

Case 1 251 62 266 62 274 63 143 61 154 61 154 61 171 62 299 63 363 67 20 57 30 57 153 57 249 55 249 55 249 55 211 56 223 57 223 57 210 57	22 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_ 1	1	111111111111111111111111111111111111111	5 1111111111111111111111111111111111111	6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9 1 1 1 1 1 1	10 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12	13 1 1 1 1	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1		1	1 1 1 1	21	1	23 1 1 1		1	26:	1	28 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	29	30 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	31 3 1 1 1	2 33 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1 1 1 1 1	36 1 1 1	37 1	38 1 1 1		111111111111111111111111111111111111111	41 4	1 1	3 44 1 1 1 1 1 1 1	1 1 1 1 1
342 57 362 57 166 56	7 : 7	1	1	1	1	1	1	1	1		1	1	1	1	,	1	1	,	1	1	1	1			1		1]	L 1	L	1	ı	1					1	3	L ,	1	1
362 57 166 56 224 56 352 54 67 53 126 51 187 51 330 50 180 49	6 6 4	1 1	i	T	1		1	1	1		1			:	. :	l I	7	1			1	1			1		1	-	1	1	1		1	1))		1	1
67 53 126 51 187 51	3			1	1	1	1	1	1	1	,	1	1	_		. 1	1	1			1		1	1	-	1	1		l .		1	1		1					1		1	1
330 50 180 49	1 1 0 5 1	1			1	1	î	1	1	i	1		1]	[]	ì	1	1	1	1		1		1 1	1 :	1	1) 1	.]	L J	1	1	1	1		1	1		1 1			1	1
394 42 54 38 75 38	2	1 1	. 1	1	1	1	1	1	1	1	1	1	1	1	3		1			1	1	1	1	1	1) 1	.]	l .]	L	1		1	,	1		1	í	,		1	1
MR.		68 1	06	6 5	27 7	7 5:	61 5	90	63	84	70	104	84	71	94	7	-1 4 90	93	85	103	1 3 91	63	107	76	99	97	1 49	4	្រ រា)4 1	29 06	10:	<i>73</i> 2	92	106	97	96	86	102 1	1 10	05 56	74

80

C SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

3856 41 60		1	2	3	4	5 1 1	6	7	8	9 1	10 11	12 1	13	14 1	15 1	6 1' 1 1	7 18	19	2 0 21 1	1 22	23 1	24 2	25 26	5 27	28 :	29 :	30 3: 1	1 3	1 .33	34 3	5 36 1	37	38 3	39 .40	0 41	1 4:	2 43	1	4 4	\$5	S	ub-total 37	
68	71	1	1			_	_	1		1	1		1	ī	1	ĩ	ı				ĩ				î		ī		1													31	
73	71									1			1		1						1					1	1		ī	1							1	1				35	
44	70			1		1																1	L				1		1				1	L				1	1	ı		37	
59	70	1				1	1	1		1						1	1				1	1																_		_		36	
150	70					1	1			1	1						1	1			1				1	1													3	ι		35	
181	70				1									1	1	. 1			1		1				1		1		1								1	1	_			3%	
195	70				1	•	1			1						1			•			1	L		1				1	1						1	_	ī				35	

B SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

																		•		•																									
Case 251	X 62	46	47	48 4	9 50	51	1 52	2 53	54	55	56	57	58	59 6 1	0 6	1 6:	63	64 1	65	66	67	68 1	69	70	71 1	72	73 1	74	75	76	77	78 1	79	80	81 1	. g2 1	83	84	85 1	86	87	88	89 1	90	Total
266	62 62										1							1				1				1	1						. 1	1	1	1			1	1				1	62
274	62			1	7	1	٦		٦		1				1				7	1					1	ì	1	3						ì	1					1			1	ī	62
76	61		1		î	i	-	٦	ī		î				_				_	~		1	1		-	_	ī	_						. –	ī		1		1				ī	ī	61
143	61		_		î	-		-	~	1	î	1	1		1	٦						_	_		1			1	1					1	1		ī						-	1	61
154	61				-	٦			1	-	ī	î	-		_	_					1	1	1		ī		1	ī	_			1		_	1		1								61
299	61					•		3	ĩ		ī	-		٦							_	ī	_		ĩ	1	_	_				1			ī		1	1	1		1				61
363	61					า		î	_	1	ī	7		_								1			ī	_	1								1			1					1	1	61
171	60					î		ī		_	_	ī		1	1					1		ī	ו		-	1	ī					1		1	ī				1		1				60
38	60				3	า	•	i				*		~ 1	_					-		ī		1		_	ī		1			ī		1	ī		1	1			-				60
262	60				1	î	1	_			٦			-	ำ	1			1	i		-	1	- .			ĩ	1	_			_		ī	ī	1		ī					1	1	60
20	59					-	-	1			ī			1 1	-	_			_	ī		1	ī	1			1		1			1		-	1		1	-1					_	1	59
30	59 59		1				ו	1	ר		_				` 1					_		î	î	_			ī		_			_		1	ī		ī	ō	0	0	0	0	0	ō	59
91	59		• .	- 1					_		1		1	1	, î					1		-	ī			1	ĩ					1		ī	ī			-	1	ĩ	•	-	-	ĩ	59
153	59					٠,	٦.	٦.			i		-	ì				1	٦	-		1	î			-	ī					ī		ĩ	ī				_	_	1		1	ī	59
	59 59					1	1	1			i							i	i			i	î				î					-		_	ī	1		1			-		ī	ī	59
249 211	58			3			_	1			i			1	1			-	_	ר		î	î	1	1		î					ı			ĩ	-		-		1			ĩ	_	58
78	57						1	-	1	7	-	1		-		٦				ī		î	ĩ	_	-		_			1		ī		1	ī			1		ī			-	1	577
223	57					٦	i	1	_	â	1	î		1	3	•			٦	ī		ī	î				1	1		-		_		_	ī	1		_	1	_				ī	57
310	57			1		1	i			-	ī	î		•	-				-	î		-	_		1		ī	_				1		1	ī	7			_				1	ī	57
	57			-	3		-		7		<u>, </u>	-		٦	1					ī	٦		7		-		î	า				ī		-	î		٦						-	ĩ	57
342 362	57			٠,	-				1	٦.	Ť	1		ı أ				1		ī	ร์	ו	_		1		-	î				_		1	î		_	ı	1			•	1	-	57
166	56				٠,	٠,				î		i	1	ז ז			1	_		_	_	•	1		î		1	_				٦		ī	î			î	_	1	ı		ī		56
224	56	1			า	-				•		-	-	_			ñ				1	1	î		ī		ī		3	1		ī		î	ĩ			-	1	ī	_	1	-	1	56
352	54	-			วั		7	7			7				1		_			1	_	ī	1		õ	0	ō	0	ō	ō	0	ō	0	ō	ō	0	0	0	ō	ō	0	ō:	0	ō	54
67	53		1		ำ	٦	-	i	1		î		1	1 1	î			1		î	1	_	-		ĭ	•	-	•	•	•	_	ì	ĭ	ĩ	ī	~		•	ĩ	ĭ	·	ĭ	ŭ	•	53
126	51		-		_	î		ñ	ī		î	1	-		•			~		-	_	1			-					0	0	ō	ō	ō	ō	0	0	0	ō	ō	0	ō	0	0	51
187	51					ī		î	-		ī	-		1	1			1		1		ī	7			٦	1	1		·	•	ň	•	•	ï	•	•	ĭ	ĩ	•	ĭ	•	ĭ	•	51
330	50			7		_	3	_			ī			ī	_		ז	î		-		٠	ī	1		ī	-	-	1	1		ĩ	1	1	ĩ			ĩ.	٠ī	j	ī	•	_	1	50
180	45			_	ו		ī				1			-			_	ī		1	1	1	ĩ	_		ī	1	0	ō	ō	0	ō	ō	ō	ō	0	0	ō	ō	0	ō	0	0	ō	45
394	42	7		1	_		_	1		3	-	1		1					1	ī	-	ī	î			õ	ō	ŏ	ō	ñ	ō	ō	ō	õ	ō	ō	ō	ō	ō	ō	ō	ñ	ō	õ	42
54	38	-		1 -		٦		-		_		ô	n	ñ (0	0	0	õ	ñ	0	õ	ō	0	0	ŏ	ō	ŏ	ō	ŏ	õ	ō	ō	ö	ō	ō	ō	ō	Õ	٥.	ŏ	,ō	Ö	Õ	38
75	36			1 1	7	7				1	2	ĭ	0		ì	ŏ	ñ	ŏ	ő	õ	õ	õ	õ	ŏ	ŏ	õ	ŏ	õ	ō	õ	Õ	ö	Ö	Ö	Õ	ō	Õ	ō	ō	Ö	ŏ	č	ŏ	ō	36
.,	,0			- +	•	-				_	_	_			_	,	-	-		-		-	•	-	-	-	-	-		-	-														
. NR			102		ന	59		, 79		94	_,	71		88		0	_10		99		98		50		76		31		10		10	8	10	0,,	2		63		61		98		76		, 2250
		112	Σ.	107	84	9	- 86	>	91		36		101	. 6	•5	9)	97		68	1	59	,	10	1	93		79	•	10	1	55		65		99		79		88		99		60	7359

C SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

Case	X	46 4	7 48	3 49	50 5	1 52 5	3 54	5 5	56	57 5	8 59	60 61	62 6	3 64	65	66 6	57 68	69	70	71 '	72 73	74	75 7	6 7	7 78	79 8	90 81	82	83 1	84 8	35 8	6 87	88	89 90	Total
41	74				1 1				1			Ţ							Ţ	1					T		_		Ţ	_					74
60	73				1			•	1			1				1		1			1						1		1	3	1				73
68	71											1										1				3	. 1			1	Ļ				71
73	71	1							1			1			1					1	1]	. 1				1				71
44	70			:	1 1				1	1	1	1						1		1	1						1			1	L	1			70
59	70		1				1	1							1	1			1		1]	. 1)	L			1	70
150	70	1			l							1					•				1				1	3	. 1		1	1	L			1	70
181	70				1				1			1				1								1	1]			:	L				1	70
195	70	. 1			l				1	1		1		1			1		. :	1					1		1								70

														U	Ď	UIL	<i>o</i> (USU	uuu	والل	UDA	رض	MI	ט כ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	010	nic	٠	MILI	٠,					•										•
Case 204	X 70	1	2	3	4	5 1	6	7	.8	9	10	u	12	13 1	14	. 15	16	1	18	19	20	21	22	1	3 24	25	26		28 1	29	30	31		ĺ	4 3	5 36	37	38	39	40	41	42	1	4 45	
210	70					1	,			1	1	1			1			1			1	1	1	1				1			1			l	1								1		
236 436	70 70				1	1	1				1	1			1							-	•	1			_		1		*			1	1				1					,	
22	69				1	1				1					1			1	1					1			1		1		1	1]	L L	1		1		1				. 1		
117 218	69 69			1	1		1				1	1		1			1	_								_		_	1		1		1	L	1								1	. 1	
232 297	69 69	1			1	1		1			ı				1		1						1			1		1	1		1		_	l l						1				1	
346	69	i		1	ì	1		-			-				î								_	1	•	1			1		1	,	-	1				1	1		1.	ı	1		
63 88	68 68				1	1	1	1		1	1	1		1				1			1			1					1	1	_	_		L	1	1		1	-				1	. 1	
95	68				_	ĩ		1		1			1	1	1	1	1										1	1	1				;	l I	1	ı			٠				1	. 1	
202 21.9	68 68	1				1	1	1		1		1	1	i	_		_	1														1	-			1		1			•	1	1	_	
49	67	1			1	1	1	1		1				1	1		1							1					1		1		1	. 1 L				1					1	1	
107 124	67 67	1			1	1		1							_			1			_		_	î			•		ī		1		:	١,					,	1.				. 1	
199 247	67 67		1		1	1	1	1	7	1		1		1			1		1		1		1	1					1	•	1			ı L					1	1			1	1	
295	67				1	ī	_	1	_			1	1					_	_		1			1	,	1			1				,		1		1						1 1		
302 3 39	67 67					1	1	1		1		1		1					1						1	1					1]		ī		î						• •	•	
340	67					1	1	1		1				1						1	1			1		1			1									1					1	. 1	
390 43	67 66	1				1	1	1	1		1	1		1	1				1										ì									1	1		1	•	1		
77	66	ī			1	1						1			ı			1	1					ı				1			1		-	ı	1	1				1			1	•	
113 120	66 66	1			1	1		1		1	1	1						1	1			1		1		1		~	1		1		_		_							1	į		
130	66 66				1	1	1	1	1			1	1	1	1			1			1					1			1	ı	1]	l 1		1.				1]		
205 206	66				1	1		1		1		1	-		•			•						1			1		1		1		1	L					1	1			1	. 1	
365 440	66 66	1				1		1	1			1	-	1			1	1					1	1		1			1	1	1			l l									1		
##0 80	65					ì			ī					ī			•	1	1							1	1		1		_							1		1			1		
94 133	65 65	1				1	1	1	1	1	1	1		1				1						1				1	1		1			L	1		1			ı	7	1	i		
190	65	. 1				î	1	-	ī	_	1	1		-	1	1		ī						1		. 1					,		-	L	1					1				1	
241 242	65 65	1	1	1	1	1	1			1	1	1		1				1						1		1			1		1	٠		L L	1								1		
286	65	1				1		1			-	_	1	_			1	1	_							1					1		1	ļ						1				1	
392 19	65 64	1			1	1				1		1						1	1		1	1	1	1					1				:	ì						_			1	1	
57	64	1		1	1	ī	1			-	_	_			1				•	1	1		1		1	,	1	1	1		1		-	L I									נ נ	1	
61 108	64 64	1	1		1		1	1		. 1	1	1		1	1	1				1	1			1		1		.1	1		ì		-	ì		1								ī	
110	64				ĩ	1	1	ī,	_	_								1								1	1		1		٠.	1		l L				1					1	1	
135 152	64 64	1				1	1	1	1	1					1			1	1	1	1	1				1	1		1		1			Ĺ	1	_		1				1	-	1	
235	64	1		,	,	1	1	,		-				1	1	1										1			1		1			l.		1		1					1	. 1	
313 332	64 64				1	1		1		1		1			1	1			1				1			-	1		ī				3	L		_		1					_	1	
34	63	,		•	1	1	1	1						1		1		1	1				1				1		1		1		1 :	L		1				1			3	` 1	
46 50	63 63	1		1		?		ì		1							1	1			1			1			-		1		1		3	L						,			1	ī	
186	63	1	1			1	1	1				1		1				1	1					1					1											1			J	•	

70		46	47	48	49	50	51	. 52	2 53				1	57	58	5 9			. 62	63	64	4 65	5 64	6 6	7 6 1			71	1	1	74 1	75	76	77	78 1	79	80	1	82	83 1	84	85	86	87	88	89
70	_						1			1	. 1		1	1		1	1	1		1			1		1	1			1	1								1					1			
70			1				_						ī	_		: -							1	1		1				1					1		1	1		1						
6	9						1		_	1				1								_			1			1		1						1	1	1								1
69	?								1					1			1				,	1			1	1		1	1	1					1			1				1				1
6	?						1	1	ı				1			1	1								1	1	1	1		i	1				-		1	î		1		•				
6	3						î		•		1	L		1		î							1		_		1			ī						1		1								
6	é			٠			1			1			1	1			1														_		_		_			1		1				1		
68	3									1			1	1			1	1	1							1		1		,	1		1		1			1			1		1			
61	3							1					1			1	1		1				1		1	1		1		1					i			i				1	_			1
6	3						1		1				i			1	_		_				-		1					ī					-			ī				-				ĩ
68	3						-		•		1		~	_			1								_	ī				ī	1				1			ı								1
6'			1						1				1				1							1	1		1			1					1		_	1		_		1				_
6			1							1			1	_			1	1			_					1		1		٠							_	1		1	1	1	,			1
6			1				1			1	•		1	1			1				1		1			1		1			1			1			1		1		1		1			1
6'	,				1					1	נ		1				i						i			1				.:	-			-				ī	-				î		1	1
6	,				-	1	1		1		•		ī	1			ī						ī		1					1		1			1			1		1						
6	7		1	1				1															_			1				1	1	1			_	_			1							
6	7	1		1		_	1				1			1			1	_					1	1		,				1	1				1	1	1	1				1	1			1
6	7						1	1	1		,		1			ı		1	1	1			1		1	1		1		1					1			1				1	_			
6 A	΄,					1	1		1	-	4		i	1		_	1	-	_	-		1	î		1	1		-		1	1				-		1				1	ī				1
6	Š	•					1		1	1				ī		1	_								1												1	1			1	1	1			
6	5					1	1	1	1		3	. :	1					1			1				1					1					1			1		1		,		-		
60	5						1											1								,		,	1		,				1			1				1		1		
66	5		1		٦.	1	1						1	1								•		1	1	1		1		1	1							ī	1					1	1	
66			_		1	1	1				1	L	i							1		1		-	_	1		-		1								ī	_		1	1		_	_	
6	5		1								_		ī				1	1		_		Ī	1		1	_				1	1							1					1			1
6	5						1				•		1		1		1	1				1			_	1				1	_		1		٠			i			1					ļ
6	5				_	1	1				1			1							1		1		1	-					1				1		1	1			1					1
6	5				1		,	,			1	_	1				1	1						٠,	1	1			1	1	1				1		1		1		_	1				1
6	2						1		í				l 1				1							-	i				1	1					1		1	î	-	1		-				ī
6	5								ī				1			1			1							1		1					1		1			1		1						
6	5		_				1	*)	L													1			1		1	1						1	1			1		1			1
6	5		1	٠,				1	. 1				1				1	1			1		1		1			1		1	1				1			i	1		_		+			
6	5		1	T	1			1			,	Ł	1			1	1	1		1		1	i			1		1		_	i				-			î	•	1	1	1	1			
6	•				-					1			ī				-			-			ī		_	_	1				-				ı	1	1	1			,		1	1	1	
6	4			1			1			_				1			1				1					1				1	1								1			_				
6	4		1			1							1	_			1	_		_	1		1			1		_		1					1			1				1				
6	4				1			1			3		1	1			1	1	,	1			,		٠,	1		1			1	'n			1			1		1		1				Ţ
6	4		1	,		1			ı				1	1		1		1	1				1		1	ı				ı		T			_			i	1	-		-				
6	ž		-	-			1		i		1	L		-		1					1		1		i	-		1		-	-				1	1	1	î	_			1				
6	ž	1				1	ĩ		1		_		1							1		1			1	1		1		1	1			,	_			1				1				_
6	4				_	_		1	1		_		1				1	1		-			1		1	1		,		-	. 1				1			1				1	1			1
6	3				1	1					1		1	1		1		1		1	ר	1	1					1	ı	1	1	ı		• •	1			i		1	1	i	1			
6.	2		1				1	Ŧ	Ţ					i		1	1	•			_	1	i		1	1			4.	ī	-	-			ī			ī		-	-	ī	ī			
۵,	<u> </u>		î			٦.	-	٦			1		ī	-	٦.	_	-						ī		~	ī				-					1		1		1							

Sub-total

27

33 31

31

29

28 28

28

3ì

25

α

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 1 ı ī ı 1 1 56 74 1 58 1 1. 1 1 1. 1 1 1 1 1. 1 1 252 1 58. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 58 1 îı 1 1 1 1 57 1 1 1 1 1 1 57 1 57 1 57 1 1 1 168 1 1 1 1 1 1 1 1 1 1 1 1. 1 1 ı 1 1 1 1 1 1 1 1 1 .1 1 1 1 1 52 116 167 1 1 1 1 1 1 1 1 1 239 256 296 304 1 I 1 1 ı 1 1 1 1 331 355 360 397 427 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 î 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 111. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 55 1 192 226 229 1 1 1 1 1 1 1 1 1 1 55 1 `1 ī ī 1 1 1 1 1 1 1 1 1 1 1 1 1 1 55 1 1 1 1 1 1 1 1 283 1 1 55 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 321 55 1 1 1 1 1 1 1 ı 1 1 1 1 55 1 1 1 1 1 1 1 55 1 1 1 1 1 11111 11

.

Sub-total

ထု

Total

C SCORES (GRAMMAR, USACE, AND STRUCTURE PART I)

NR	243 281 300 404 157 237 118 151 366 393 238 198 257 364 420	147 175 183 349 354 216	225 312 333 358 389 103 132 382	Case 429 .84 155 169 265 317 323 445
	50 50 50 50 50 50 50 50 50 50 50 50 50 5	5555555	53 53 53 53 53 52 52 52	X 55 54 54 54 54 54 53 53 53 53 53 53 53 53 53 53 53 53 53
11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1	1 1 1 1	1 1 1
.4 18	1 1 1 1	1	1	1 1
9 18	1	1	1	3 1
14	1	1	1	4
7 43	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1	1	5 1 1 1 1 1
93	1 1 1 1 1 1 1 1 1 1 1	1 1	1 1 1	1 1 1 1
71	1 1 1 1 1 1 1 1 1	1 1 1 1 1	1 1 1 1 1 1 1 1	7 1 1 1 1 1 1 1 1
15	1 1 1 1	1	1	8 1 1
5 12	1	1	1	9111111
15 21	1 1 1 1 1	1 1 1	1	10 1 1
11	1 1 1 1 1 1 1	1 1 1 1	1	1 1 1 1
.5 19	1 1		1	12
12 7	1 1 1 1 1 1 1	1 1 1	1 1 1 1 1	13 1 1
13	1 1 1 1 1	1 1 1 1 1	1	14
0 17		1	1	15 1 1 1
17 2	1 1 1		1	1 1 1 1
83	1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1	1	17 1 1 1 1
12	1		1	18 1 1 1 1 1 1
17 6	1	1	1	19 : 1 1 1
'4 16	1 1 1	1 1 1 1	1	1 1
5 18	1 1 1 1	1		1
15 8	1	1	1 1 1	1 1 1
3 99	1 1 1	1 1 1	1 1 1 1 1 1 1	23 1 1 1 1 1
19	1 1 1 1 1 1	1	1	24
11 2	1 1 1	1	1 1 1 1 1	25 1 1 1 1 1
7 15	1 1 1 1 1	1 1 1	1 1 1	26 1 1
2 17:	1 1 1 1	1	1	27 1 1
72 5	1 1 1 1	1 1 1 1	1 1 1 1 1 1	1 1 1 28
193	1	1	1	
3	1 1 1	1 1 1 1	1 1 1 1	ı
170	1 1	1	1	31 1
18	1 1 1 1 1 1	1		32 1 1
9 48	1	1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1
19		1	1	34
16	1 1 1 1		1	35
	1 1	1 1 1		1
198 '	1	1	1	37 1
169		1	1	38 1
) 163	1 1 1 1 1 1 1	1	1	
14	1 1 1 1 1	1	1	1 1 1
173		1	1	1 1 1 1
1	1 1 1 1 1 1 1 1 1	1 1 1	1 1 1 1 1	42 1 1
184 4	1	1	1	43 1
78	1 1 1 1 1 1 1 1	1 1	1 1 1 1 1	44 1 1 1 1
130		1 1 1 1	1 1 1 1 1 1 1	45 1 1
)	,			
	3: 2: 2: 2: 2: 3: 3: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2: 2:	2; 2; 2; 2; 2;	30 30 20 20 20 20 20	Sub
	554432214444	5 5 9 2	7	7 3 3 9
				1

D SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

Case	X	1	2	3	4	56	5 7	8	9	10 1	ıı	2 13	14 15	5 16	17	18 19	20	21	22 2	3 24	25 2	262	7 28	29 3	0 31	. 32 :	33 34	. 35	36 37	7 38 3	19 40) 41	42 43	3 44	45	մ սե	⊢total
172	67				1	1 1	L	1	ı	1						-	1		1		1	L	1					1						1			33
178	66						1							1					1		1		1	1	. 1			1	1	1	. 1						34
410	66					1 3	٠.1		1	1		1	1							•			1	•		:	1.						1	1			34

ုပ္င

Total

D SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

1 1

1 1 1 1 1 1 1 1 1

Case	X	46 47 48 49 50 5	51 5	2 53	3 54	55	56	57 5	8 59	60 (61 62	63	64	65	66	67	68	69	70 71	72 73	74	75 7	6 77	78	79	80 8	n 82	83	84 8	5 86 87	88 89	90	Total
172	67					1				1		1		1	1		1	ı		1					1	1]	L						67
178	66]	L .	1		•	1	1		1	L						1	1		1		1			1	1	L		1			1	66
410	66			1	1	•	1			1 3	l '						1	1						1		1	L	1	1			1	66

1 1

1 1 1 1

1 1 1 1 1 1 1 1 1

1 1 1 1 1 1 1 1 1 1 1 1 54 54 54 54 54 54 54 1 1 1 ı 1 1 1 ı ı ı 1 445 1 312 53 53 53 53 52 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 358 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 103 1 1 1 1 1 1 1 1 1 1 1 1 52 51 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 51 51 51 50 50 50 50 50 50 50 1, 354 216 118 47 1

C SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 1 1 1 1 1 1 63 1 1 1 1 1 1 1 61 61 . 1 59 59 59 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 58 58 58 58 57 1 1 1 1 1 1 1 1 1 1.1 ī 1 1 1 1 1 1 1 1 1 1 1 1 1. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ı 57 57 57 56 56 56 56 56 56 1 1 1 1 1 419 443 1 1 1 1 1 1 1 1 1 1 1 1 1 255 280 1 1 1 1 1 1 1 1 1 1 1 1 1 / **1** 1 1 1 ī 1 1 55 55 1 1 1 1 1 408 271 ì · 1 1 1 1 1 1 1 1 1 1 1 **i** 1 437 1 1 1 1 1 1 1 51 1 1 1 1 1 1 1 48 48 47 47 1 1 1 1 1, 1 288 ī 1 1 1 1 1 1 1 1 1 1 1 ı 1 1 1 1 1 228 1 1 1 1 1 1 1 1 1 1 1 1 1 1 46 1 1 1 1 1 1 īī 1 1 1 1 1 1 1 1 43 ı $\begin{smallmatrix}1&1\\1&1&1\end{smallmatrix}$ 1 ī ĩ 1 1

Sub-total

0	v	.,	,,,	10	10	۲۸	_	57	5 2			. E4	gr:	go	En.	60	61	6	2 6	3 6	. 4	5 4	4 4	7 6	ia i	60	70	71	72	77	3 7/	7	. 76	7	ין י	70	80	เลา	82	2 83	8/	85	. <i>86</i>	87	88	go	90
Case 405	65	46	47	48	49	yυ)1 1			>4	1	1	.)/	20	27	Q J	1	. 0,	1	, 0	40	,, 0	. 0	ָרָ יִי	Ĺ	J-7	,,,	1	1 <	í	, ,,	, ,,		- •	1)	ĩ	ĭ		1			•	. 51	88	٠,	í
416	65 64								1		1	1	1	3		1					,	1	1	1	L						1				1		1	1				1	1			ı	1
290 350	63						1				i	î	1	•		ī			1		•		-	ַ	L :	1				1								ī			1	_				_	1
356	62						1		1			1	1			1	-	1		,	1	L ,		,	. :	1				1	1				1		1	1	1	1	3	٦.	1			1	1
361 145	61				7		1		1		1	ì	1	1			ì				í	i	'	•		ı			1				1		-		1	ī		_		_	_				ī
289	61						_		1		_	1	1	1	1				.1		_	1		3	L :	1		1		1	į		,	•	1		1	1					,			1	
417 435	61			1	1	1					1	1	1			1			1	1	. 1	1	1	. 1	1	J 7		1	1	1	1		1	T	1	1	1	ì					î			1	
.131	59					1				1	1	1	ĩ		1	ī	1		1	_			-]	L	_				1	1						1			1	1	1	1	1		1	
215 217	59		1					1	1	1		1			7	1)	1 1		1	L	1			1	1	1							1		1	1					1	1
311	59 59	'				_	1	ì		_			1		ī	•	1				1			1	1	ī		1			1 1 1 1 1 1		1		1			•			٦.	٦.					
370	59					,	1	ļ		1	,	1	1	,		1	٦		,	,	,	נ	.]	.]	1	1			1		1		1		1		1	1	ו		1	3	1			1	1
267 305	58 58		1		1	1		i			1	i	_	-			i		i	î		1	. •			•				1	1				î		1	ī	î		ı	-					-
359	58		1		_	1	1	1		1	1 1 1	1				1			1		1	١,		1	1	1	,			,	,	,				1	1	1		1		,				1	1
421 227	58 57						1		ו									1	1			1		. 1	1	i	1	1		i	i					1	-	ī		1	ı	_	1			ī	1
259		1			1							_	_			1	ī	ĩ	1		1	۔ ا							1	1	1			1	-	_	1	1			1	1				1	
338 419	57 57				1	1		1	7		1	1		1	1		,	1	1			1	. 1	J	L	1			1	1	1				1	1	1	1			1	1	1			1	
443	57			1	-						1 1 1	ī	1		_		_	ĩ	ī			ī]	L	1			ī	1					1		1	1			1	_	1			1	-
176	56		1			1	,	1	1		1	1	1		1			1	1		,	1		3	L	1	1	1	1	,	1		1			1	7	1	ı		1	1		1		1	1
255 280	56 56							1				i				1		_			j				•	1	-			î	ì		ī			-	î	ı	_	1	ī	ī		1		1	
292	56		1		1		1	1			1	1		1					1		,	1		1	1	,			,	,	1				,			1		,		1	1			1	1
377 336	56 55					1	1		1		T	i	1	ı	T	i		1			1			_	•	i			1	ī			1		_		1	ī		-	1	î	1				1
348	55		_				1	1	_		•	1	1		ī	1	ļ			1		l _]	1	1		1		1	,	,						,	1	1	1	1		1	1	1	1
408 271	55 54		1	1		1		_	1		1	1	1		1	1	1		1]	l L]		٠. ا	L	1				1	ì	. 1						i	ì		1	ì					i
341	54			-			1	1	1		_	_	1	_	_	_	1		_		_	į		1	L	ī	1	1	1	1	1	1			1		1	1	1		1						1
418 430	54 54		•		1	_		7	-		1		7	1	1	1	1		1		1	נו ו		1	L I	J		T	1	1	T				1		1	i	1			1				1	1
182	53		. •		1			î	-		1	1	ī			_			1			1		3	ī	ī		_	ī	ī	1				1		1	1			1	1				ī	
196 395	53 53		1			1	1	1			1		1		1		1	٠,	1		1		ו]	l .	1		1	1	J.	1						1	i			1	1			1	1	
411	52			1							ī	ī	_		1	1	_	-	ī		-		. •	. ;	ī	-		-		ī	1				1		_	ī	1			1	1			1	1
412 413	52 52			1	1	1	1	î	,		1	1	1	1	7	٠,			1		1	٠,]		1			1	1	1			3				1	1				1		1	1	_
260	51	1	1					1			ī	1	ī	_	•	-	_	1				•		3		î	1	_	_	ī	1			_	1		ļ	_	,		1		1		1	1	
293 437	51 51				1	1		1			1	i	1	1		1	i		. 1	1		1	•	1	l	T	1	i		1		1			1		1	i	i	_	1	7		ī	1	1	1
326	49					1		1	_		1	1	1	_	1	_	ī	1	'n	-		<u>֝</u>	1	. 1	Ĺ		1		1	ļ	1				1	1	-	1	1	1	1	1				1	
285 288	48 48	1				1	1	-	ı		1	J.	Ţ			J	1	1	. I		ו ר	1		1	, :) T			1	i	1		1				i	i	Τ.		1	ï		1	1	i	
324	48					1		1	1									ī	ī		-	i		j	Ĺ	1		1	ī	ī	_		_		_		1	ī	1		1	_		1		1	1
228	47		1		1		1	1	1	1	ı	1	1			1			1	1]	נו		7	. :	1				1	1		1		1	1		1	1	1	1	1		1	1	1	
244 375	47			1		1	1	ì				٦		٦		3	٦.		1	i	. 1	เวิ	1	. :	ì	î	1		1	î	•		-	1	ı	1 1 1		ī	_	-	-	ī		1			1
287	46					1						1	1		1		1	1						:	1	1		1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
231 353	45 45							1			1	T	1		1	1	T		1			1	. 1	. 1	L	1	1	1	1	1	1	1	i	1	ì	i	i	1	i	i	i	i	i	ì	1 1 1	i	i
173	43						ī	_		_	_	1	ī		_	_		1	ĩ	1		Ĺ	. 1	. • 1	L	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

D SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 Sub-total 1 1 1 32 31 1 1 21 444 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 36

F SCORES (ORAMMAR, USAGE, AND STRUCTURE PART I)

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 1 2 3 4 1 ı ı 1 I 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1, 1). 1

Sub-total

D SCORES (GRAHMAR, USAGE, AND STRUCTURE PART II)

46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 Total 32 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 $\begin{smallmatrix} \circ & \circ & \circ & \circ & \bar{\circ} & \bar{\bullet} & \bar{\bullet$ 0 0 0 0 0

F SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 i ı 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ı 1 1 1 1 1 1 1 1 -1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 ı 1 ı ì 1 1 1 1 1 1 1 ı 1 1 1 1 ı 39 1 1 1 1 0 0 0 1 1 1

F SCORES (GRAMMAR, USAGE, AND STRUCTURE PART I)

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

NR 19 29 24 15 28 25 35 30 28 16 32 23 33 25 16 13 32 27 22 23 26 21 12

F SCORES (GRAMMAR, USAGE, AND STRUCTURE PART II)

A SCORES (VOCABULARY)

Case 7 13 10 51 69 24 15 82 23 37 48 192 203 333	48 47 47 47 47 47 47 47 47 47 47 47 47 47	1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5	1 1 1	7	1	9	111111111	11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11 :	14 1	5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	7 14	1 1 1 1	20	1 1	22 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	23	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	25 2 1 1 1 1 1	. 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1	30	1 1 1 1 1	1 1 1 1	111111111111	1	35 : 1 1 1 1 1 1	1	37 : 1 1 1	38 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 42	1	1 1 1 1 1	1 1	146	1111	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1	Tota 48 48 47 47 47 45 44 42 40 39 35 33 30 27	1
32	24	J		1	ī		1	1	1	ĩ	1		1		1	. ī			ī	1	1	ī		ī		_		1				ī		_	_	1	ī	1	1		1	-		î	ì	ī	•	-	24	
NR		15	18	14	13	19	15	14	16	17	10	19	15	17	18 I	46	1	7 1	14	. 18	16	4	17	13	19 1	21	A 12	2 16	18	15	15	10	18	9	18	14 /	L 1	4 1	5 17	7 19	17	Δſ	16	17	34	12	18	17	71.2	

B SCORES (VOCABULARY)

Cas	e X	: 1	2	3	4	5 (57	8	9	10	u 1	2 13	14	15 16	17	18	19 2	0 21	22	23	24 2	26	27 2	28 29	30 :	31 32	2 33	34	35 3	36 37	38	39	40	41	42 4	3 4	4 45	46 1	47 48	49 50	Total
31	4	8																					3	L							1										48
45	4	8														1															1										48
159	4	6	1																1			1										1			•						46
4	4	5												1								1							1		1				1						45
23	4	51															1		1								•				1				1						45
115	4	5			1						1								1												1						1				45
33	4	41	1					1			1								1				3																		14
38	4	4					1			1				1						1]	L					1												44
47	4	4					1			1				1														1	1		1										44
294	4	4																1					1	ιı								1	1	•					1		44
2	43	3				3	Ĺ			1	1												1							,	1	1			1	L					43
12	. 43	3					ı]	1			1				1				1			:	1		43
16	4:			1	1									1														1	,	•	1	1							1		43
40	43	31					1							1						:	1					1			1		1										43.
67	4.	3	1				1												1			1							1		1				1	Ĺ					43
86	4	3												1					1	:	1								1]	L.	1			1,				:	1		43
148	4	3				1	L			1	1					1						1							1		1				•					'	43
272	4	3							1	1				1		_				٠.	1			1					1 .		1										43
11	42	2 1							_	_				_					1	1			1	<u> </u>					î.	'1	1								1		12

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 11 11 11 11 11 11	1 0 1 1 1 1 1 1 1 1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1	1 111	9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 11 11 11 11 11 11 11 11 11 11 11 11 1	1 1 1 1 1 1 1 1 1 1	13 1	3		1	7 16	1	1	1	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		100111111111111111111111111111111111111	1	11 11 11 11 11 11 11 11 11 11 11 11 11	1 1 1 1	1 1			1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1, 1	1 1 1 1 1 1 1 1		11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1	1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 0 1	
36 1 36 1 36 1 36 36 1 36 1 36 1 35 35 1 35 1	1 1 1 1 1	1	1	1 1	1 1		1 1 1 1 1	1	1 1,	1	1	1 1 1 1 1 1 1 1 1				1		ī 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1	1	1 1	1 1 1 1 1	1		1 1 1 1 1 1 1 1	1	1	1		1	1111111111	1 1 1 1 1	1	1	1 1 1	1	1	111111	1 1	1	

99

```
100
```

77 17 07 30 31

23 24 25 26 27 28 29 3 1 1 1 1

2 8

```
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41
                 56
         1 1 1 1 1 1 1 1 1 1
                                                                                 1
                                                                                            1
                                                                                                    1 1 1
                                                                                                            1
                                                                                              1
                                                                                           1 1 1 1 1 1 1
                                                                                                            1
                                                                                                                                1 1 1
                                                                                                                                       1
                                                                                                          1
                                                                                                               1
                                                                                      1
108
    29 1
                       1 1 1
                                                                                                            1
                                                                                                               1
                                             1 1
                                                  1
                                                                1
    29 1
29 1
                                                                                                          1
                                                                                                            ì
                                                                                                               1
                                             1 1
                                                  1
                       1 1 1
    29 Î
29
                                          1 1 1
                                                                                 1 1 1 1
230
239
            1 1 1 ..
                                1 1 1
                                                                                         1
                                                                                                                 1
                                                                                                                                        1
                                                                                                    1
            1 1
                                        1
                                                1
                                             1
                                                                                                                 1
    29 1
29 1
29 1
29 1
                                                                                                                                1 1 1
                                                                                                                                       1 1 1
243
286
            1 1
                             1
                                                                                      1
                                                                                               1
                                                                                                                                        1
325
354
                                        1
                                                                              1
                                                                                            1
                                                                                                                          1
                                          1
                                                                                                               1
                                                                                                                          1
            1 1
                               1
                                        1 1 1
                                                     1 1
                                                                                                            1
                                                1
                                                                                            1
                                                                                                    1
                                                                                                       1
                                                                                                                             1
357
    29
               1
                       1 1
                                                                              1
                                                                                    1
                                                                                      1
                                                                                                 1
                                                                                                                          1
            1 1
1
                                                                                         1
                                                                                   1
                                                                                           1
                                                                                              1
                                                                                                 1
                                                                                                    1
    29 1
28
                          1
                                                1
                                                                                         1
1
1
                                                                                      1
                                                                                                            ı
                                     1
                                                                                 1
                                                                                                            1
    28 1
                             1 1
                                                1
                                                  1
                                                                1
                                                                   1
                                                                                                                                     11 "
                                               ì
    28 1
                                                                1
                                                                              1
                       1
237
                     1
                                                                                                            ı
                                                                                                                          1 1 1
                                                                                                                                     1 1
                                                                ı
                                                                           1
269
    28 1
                             1
                               1
                                     1
                                                        1
               1
                                                                           1
                                                                                 1
                                                                                   1
                                                                1
303
    28 1
                                     1
                                          1
1
                    1 1 1 .
                                                                                                          1 1
                                             1
                                                                              1
                                                                                 1
                                                                                            1
304
                                                1
                                                  1
                                                       · 1 1.
    28 1
                                                                           1
                                                                                 1
                                                                                      1 1 1
                                                                              1
                                                                                                 1 1
321
339
    28 1
28 1
                                                  1
                                                     1
                                                        3
                          1 1
                                                                                                          1 1
                                                                                                                       1 1
                             1 1
                                                                           1
                                                                              1
                                     1
                                                                1
384
390
401
429
57
64
                                                                                                            1
                                                                                                               1
                                                                                                                 1
                                                                                                                    1
                                                                                                                          1
                                                                                                                             1
            1 1
    28 1
                             1 1 1
                                                1
                                                                                      1 1 1
                                                                                                    ı
                                     1 1 1
                     1 1
                             1
                                                                1
                                                                                              1
                                                                                                                             1 1
    28
             1 1 1 1
                             1 1
                                     1
                                             1 1
                                                                                                 1 1 1 1 1 1 1 1 1 1 1 1
                                                                                         1
    1 1 1
                                                                                                            1
                                                                                                                             1 1
                                        1
                                                1
                                                        1 1
                                                                      1
                                                                           1
            1
                                     1 1
                                                                      3
                                                                                           1 1
1 1
                                                                                                            1
                                                                                                               1
                                                           1
                                                                                                            1 1 1
               1
                       1
                                                                           1 1 1
                                                                                                 1 1 1 1 1 1
                                     1 1 1
119
                    ı
                     ı
129
241
261
268
                                                                           ı
                                                                                                                                             1
                                                                              1
                                                                              1 1 1
                                                                                                            1 1
                                                                      1
                                                                           1
                                                                                 1
            1
                                             1
                                                                         1
                                                                                                                                  1 1
                                                                                                    1 1 1
                                                                                                                                        1
                                                1
            1 1
                                                                                                         1 1
                                                                           1
                                                                                                                                     1
368
44
117
135
137
                                    1 1
                                                                                                                    ī
                                           ı
                                                                                                                                        1
            1 1
                                                                              1
                                                                                                                 1 1 1 1 1 1
                                                                                   1.
                                                                                                               1
                                             3.
                                                                                                                                     1 · 1
                     1
                                                1
                                                                1 1
            1
                                                        1
            1 1 1 1 1
                    1
1 1
1 1
                         1 1 1
                                            1
                                                                                                         1 1 1
                                                                                                               1
                                                                                                                                  1 1
                                                1
                                                                   1
                                                                                                    1 1 1 1
                                                                              1 1 1
                                             1 1
                                                                   1 1
164
169
190
218
247
                                                                                              ī
                                                                                      1 1 1
                                                                                                                  1
                                                                                                                    1
                                                                                                                             1
                          1 1
                                                                                                 1
                               1 1
                                                                                         l
l,
                                                                                               1
                                                                                                                                        1
                                                                              1 1
                    11111
                       1
            1 1
1 1
                                                ī
                                                                                                               1
                                                                                                                                  1
                                                                                              1 1 1
1 1 1 1
1 1 1
1 1 1
                          1
                                                1
                                                                                                                                     1 1
                                                                                                                                  1
                                                                                                                                        ī
                                1 1
1 1 1 1
                                                                                                                    1
                                                                              1
                                                                                         1 1
    26 1
26
26
                                             1 1
1 1
1 1
                                                                                                          1
                                                                                                            1
1 1
1
295
                                                                            1 1
                                                                                            1
                                                                                 1
                                                                                   1
                                                  1
                                                                          1 1 1
315
316
358
383
71
            1
1 1
1 1
                                     1
                                                  1 1
                                                                                   1
                                                                                      1 1 1
1 1 1
1 1 1
                                                                                                                                     1
                          1 1
                                                                                                                                        1
                                                                                   1
                            1 1
                                             1 1
                                                  1
                                                                   1
                                                                                                                                        1
                                     1
                        1
                                                                                                    1
                                                                                 1
                                                                                                          1
                                                                                                            1
    26 1
                                                                1
                                                                      1
                                                                        1
                                                                           1
                                                                                   1
                                                                                                 1 1
    25 1
            111111
                                             1 1
                                                   1
                                                                                                          1
                                                                                                            1 1
                                                                                                                 1
                                                                1
                                                                      1
                                                                                               1
                                                                                                                                           1 1
                                                                                                               1
                                                                                         1
                                                                                                                                     1 1
    25 1
                                     1
                                                1
                                                  1
                                                                1
                     1
                             1
                                1
                                                        1
                                                                                              1 1 1 1 1 1 1 1 1
                                                                                                                 1
                                                                                         1
                                                                                            1
                                                                                                               1
                                                                                                                                     1
                                                                                                                                             1
                       1
1
1
                                                                1
                             1 1 1
1 1
1 1 1 1
                         1 1
1 1
                                                                                   1.
1.
                                                                                                    1
1
1
            1 1
                                                                                                                    1
                                                                                                               1
                                                                                   1 1 1
1 1
1 1 1
                                                                                                       1 1
                    1
                                                                                                                 1
                                                                                                            1 1
                                                                                                                    1 1 1
248
    25 1
                  1
                                        1
                                                        1
                                                                1
                                                                                                          1
                                                                                                                             ıī
278
               1
                                                                1
                                                                              1 1
```

12 13 14 15 16 17 18 19 20 21 270 320 331 ī 1 1 ī 1 1 1 1 21, 1 21, 1 23 1 ī 1 1 1 1 1 1 1 1 1 ī 1 1 258 297 318 337 360 374 414 188 1 ī 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 î ī ī 1 1 1 ī ī 1 1 îī 1 1 380 404 415 22 1 22 1 22 1 22 1 22 1 1 1 ĩ 1 ī 1 1 1 21 1 1 1 1 1 1 1 1 1 21 1 21 1 1 1 1 1 1 1 1 ı 1 1 1 1 1 1 1 1 1 1 333 397 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 21 1 1 1 1 1 1 1 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 364 127 312 355 388 1 1 1 1 1 ī 1 1 1 1 1 1 1 1 1 1 1 1 ī 1 ī ī 1 1 1 1 1 18 1 18 1 1 1 1 ī 1 ī 1 1 1 ī 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 ī 1 ī 1 1 1 0 0 0 1 1

```
ជ
ខ្លួនក្រុងភាគភាគគគគិននិងនិងតែងងងងាងឥតកាលពិលល
                       S
Š
                       64
1,00
                       8
0716
                       7.7
0112
                       9‡
                       44 45
#
                       5
                       3
31
                       7
                       3
                       33
       98
                       36
8444
                       35
32
        147
                       134
                       23
244
2444
                       31
        377
                       ಜ
8444
72
                       28
118
                     D SCORES (VOCABULARY)
                       27
7 73
224
                       25
1 25
7 7
                       ቲ
                       23
25
                       8-
8---
         9
                       ಸ
ನ
         185
                       ଷ
844
2444
                       18
         2
                       ≉
                       ध ध
       151
                       Ħ
         69
                        ™ಬಬ೪
 288
240
340
254
```

な

ଷ

ನ

8

3

x

2

3

X

SCORES (VOCABULARY)

፞፞፞፞ቜ፟፠፠፠፠፠፠፠ 8 57 34 5 3-d 33 ጸሓ Ħ 33 ಜ 8 8 8 52 ねょ S 2 ನ ଷ 17 24444 5 ∄ ង 24 Ħ 23£35225£

D SCORES (VOCABULARY)

מס אסאא אא 0 0000000 44 20 _ 0000 53 8244 73 7.7 ಇ. 8 4444 Ħ PRESERVE CONTRACTOR STATE OF S

젊

8

8

Ħ

బ

ನ

13

25 12

ន

Ħ

££6357£££23337£238**3**2623833552333355 ££6357£££23333£238**3**2623333552333555

F SCORES (VOCABULARY)