

新编研究生 英语泛读教程

陈淑华 主编

北京邮电学院出版社

COMPREHENSIVE
READING
COURSE

COMPREHENSIVE READING COURSE

新编研究生英语 泛读教程

主编 陈淑华

编者 彭 漪 柳淑华 郭宏伟

北京邮电学院出版社

(京)新登字 162 号

新编研究生英语泛读教程

主 编:陈淑华

编 者:彭 漪 柳淑华 郭宏伟

责任编辑:周 明

*

北京邮电学院出版社出版

新华书店北京发行所发行 各地新华书店经售

北京地质印刷厂印刷

*

787×1092 毫米 1/16 印张:8 字数:203 千字

1992 年 7 月第一版 1992 年 7 月第一次印刷

印数:1—6500 册

ISBN 7-5635-0091-X/H·1 定价:6.50 元

前 言

中高级阶段的英语教学在我国已进行多年,英语界的许多专家、教师一直在探索此阶段英语教学的最佳模式、最佳教法和最合适的教材。为了深入探讨和研究研究生(非英语专业)的英语教学,国家教委以及外语界的同仁投入了大量的人力物力。继1988年重庆会议以后,在国家教委的支持和关怀下,1990年全国理工科院校研究生外语教学研究会(非英语专业)在西安召开会议,着重讨论了制订新的研究生英语教学大纲的问题,并正式委托北京市研究生英语教学研究会起草新大纲草案。1991年夏,北京市研究生英语教学研究会又召开年会,对新大纲草案进行专门讨论,明确了研究生英语教学的方向和要求。

参加本教材编写的人员始终参加了本大纲起草、编写和制订的研讨工作,对新大纲有较深入的了解。本教材完全依据新的研究生英语教学大纲,在广泛调查研究的基础上,对内容、词汇和难度等作了规定,具有一定的科学性。本教材是我们计划编写的研究生英语系列教材之一,适于各类通过国家四级考试的本科生、硕士生和博士生使用。

本教材由陈淑华同志主编,彭漪,柳淑华和郭宏伟同志编写。在教材编写过程中,我们得到北京邮电学院、北京科技大学、北京航空航天大学有关方面的大力支持。杜晓、张辰和崔淑兰等同志为本教材的编写给予了很大帮助。这里一并表示真挚的谢意。

由于我们对新大纲的理解深度和业务水平有限,瑕疵难免。望各兄弟院校及英语界同行在使用过程中多提宝贵意见,使这本教材更趋完善。

编 者

1991年12月 北京

CONTENTS

ON READING AND HOW TO READ	(1)
A QUICK GLIMPSE AT ENGLISH WORD-FORMATION	(4)
1 The Main Idea	(7)
2 Inference	(8)
3 Making Generalization	(10)
4 One-World Culture	(12)
5 My Journey Beneath the Earth	(14)
6 The Next Giant Leap for Mankind	(16)
7 Fishes	(19)
8 Reducing Fat in Foods	(21)
9 Mosquito, Raven and Scorpion	(23)
10 Land Valuation	(26)
11 On Antenna	(28)
12 Concurrent Engineering	(31)
13 Tomorrow's Telephones	(34)

14	Pocket Phones	(36)
15	Communications	(38)
16	Supertelevision	(41)
17	Water or Water Transport	(43)
18	What Makes the Weather So Hard to Forecast	(45)
19	Nuclear Power Plots a Comeback	(47)
20	Solar Energy	(50)
21	Deadly Danger in a Spray Can	(52)
22	Kids Who Can't Say "No"!	(55)
23	Fusion and Fission	(57)
24	How to Go Back in Time	(59)
25	The Development of the Public Railways	(60)
26	The 21st Century Vehicles	(63)
27	Battle of the Music Giants	(65)
28	Cyberpunks and the Constitution	(67)
29	Smart Cards	(69)
30	Who Invented Microprocessors?	(71)
31	Fifth-Generation Computers	(73)
32	Some Practical Uses of Computers	(75)
33	Surgical Instruments	(77)
34	Fiber Optics Light Lines to the World	(79)
35	Looking for Lumps	(82)
36	Cells That Carry Messengers of Health	(84)
37	Robots	(86)
38	New Scientific Breakthroughs	(88)
39	Satellites—High-flying Birds of High Tech	(90)
40	Venus's Youth and Beauty	(93)
41	The Age of Superstuff	(94)
42	Advanced Materials	(96)
43	Superconductor Search; A Race and an Obsession	(98)
44	The Dangers in Dinnerware	(101)
45	Long-playing Record (LP)	(103)
46	AIDS in the Age of Reason	(105)
47	Alcohol's Youngest Victims	(108)
48	Scientific Technobabble	(110)
49	How the Planet Works	(112)
50	The World's First Spherical Screen Stereoscopic Film	(114)
51	American's Life in the Scientific Age	(117)
52	Mystery—and Maybe Danger—in the Air	(119)

ON READING AND HOW TO READ

Words are symbols for ideas. The reason man developed the use of words was to communicate with each other in as clear and direct a way as possible. To read means to interpret, to understand, to grasp the meaning of symbols.

Today, mere "reading" is not enough. Just to keep up we must learn to read efficiently. Ideas are exchanged at higher and higher speeds. Our speed of receiving these messages must also increase if we are not to be overwhelmed. To receive and absorb messages better, we must read better, and speedily. By "speed reading" we are really talking about the speed of comprehension, rate of interpretation, and the speed or efficiency with which we are able to understand the symbols on the printed page. Reading without understanding is not reading. It is just looking at symbols. The efficient reader does his reading in the least possible amount of time. He does not waste time or energy; neither is he satisfied with getting only half the information available in what he is reading. He makes the full substance of the ideas his own, and does so in the shortest time possible for him.

The amount of information which we either desire to, or are required to make our own is increasing constantly. The ability to absorb useful information quickly is the greatest single aid to high achievement. Your aim in this course is to learn to read rapidly. Therefore, your aim now is not that you are learning to look at 5,000 words in a very short period of time, but that you are learning to comprehend printed material as fast as is humanly possible for you.

What is satisfactory comprehension? When is comprehension sufficient? At what point can you say "I understand enough"? The answer to these questions depends on why you are reading. Your purpose may be simply the wish to be entertained; it may be simply for pleasure; it may be a requirement to find specific answers to specific questions; it may be to understand knowledge as thoroughly as possible. When you have found what you sought, and it satisfies your purpose, you have comprehended. You have grasped the meaning you were after in the light of your purpose—you have reached your objective.

The speed with which you read will be determined to a great degree by the nature of the material as well as by your purpose in reading.

Reading is never merely a simple mechanical skill. When it is properly cultivated, reading is essentially a thoughtful process. Let's agree that to read is to understand; that the reader's purpose in reading will determine what he gets out of the reading and that whether he achieves that purpose will be determined by the nature of the material as well as by its readability. A textbook on linguistics cannot be read at the same rate of speed as can a novel. If you are a scientist reading a book on science, you will surely have to read more exactly than you would if you were reading a light novel.

A flexible reading performance means a high rate of efficiency resulting in a satisfactory attainment of the reader's purpose. The reader is performing in the best possible manner, wasting no time or energy, and he is getting out of the material exactly what he is after. What we must work toward is versatile, efficient, flexible reading. The flexible, mature and efficient reader adjusts his rate of reading to suit his purpose and the material to be read. He surveys the text, then skims it, scans it, or studies it. These are some of the techniques which we employ in reading.

In surveying material to be read, we take a preliminary look to find out as much as we can about it before we begin the reading. We are really taking a comprehensive view of the situation just as a bird makes a quick survey of the conditions before going forward for food.

If the material presented is a book, the survey would include looking at the index, reading the table of contents and the preface, and previewing illustrations. The survey introduces us to the general content, and gives us some idea of what to expect in our reading. Surveying helps us decide whether or not a particular book or article will help us accomplish our purpose for reading it, and determine the method we will use in accomplishing that purpose.

Skimming is reading swiftly and lightly, looking for a few points or a general idea. The answers to skim-type questions are generally found clearly stated. Also, they are apt to be short—perhaps only a word or two. In some instances, however, several facts may be needed.

When skimming, the reader should not read word-by-word. Instead, he should let his eyes run over the sentences until he spots one of the key facts that he is seeking. Then he should read the sentence quickly to get informational clues as fast as possible. If that sentence answers only one of the questions, and more facts are needed, he skims on; the reader should continue reading swiftly and lightly, looking for other key words and sentences, until he has found answers to each skim question.

Like skim-type questions, scan-type questions are usually literal in nature. They are useful in organizing material. The answers to scan-type questions may be more difficult to locate, because they are found in different parts of an article. The facts needed to answer them may be a series of ideas or a sequence of events. They need a certain amount of discrimination.

In scan-type reading the reader may need to read the article all the way through. He reads fast but carefully, proceeding point-by-point in order to answer the questions. Generally the reading rate for scan-type reading, while they are very fast, will be somewhat slower than the skimming rate.

When you are reading reflectively, to make a judgment, and to absorb new ideas, you will be doing study reading, i. e. , reading carefully and reflectively, even rereading if necessary, so as to make a good judgment.

Study-type questions require more than literal information. The reader must be able to read critically. He must be able to read between lines; he must be able to weigh all the facts against his own experiences, or against an acceptable criterion. Study reading is always the most demanding.

In study-type reading, the speed is slower than the skim or scan pace. Rereading and pausing to reflect necessarily take time. When the reading purpose is clear, it will serve to direct thinking, and the reading performance will be characterized by an idea-by-idea procedure in contrast to a piling-of-word-upon-word-type reading.

Rereading is a checking device which helps the reader to confirm an idea, to evaluate, to clarify, or to recreate a sequence. It should be done at a fast scan or even a skim rate.

Some people have the idea that a study-type performance is really reading, while skimming and scanning are not. This is not true. Skimming and scanning, like study-type reading, represent useful and practical techniques which allow the reader to adjust his rate of reading to accomplish his purpose. The efficient reader is flexible. He can survey, skim, scan, or do study-type reading according to the kind of material he is working with, and according to the results he is seeking. But do not forget, though, that reading is communication. To read is to comprehend - to understand - to recognize the symbols for ideas. The manner in which these ideas are presented, our familiarity with the words and expressions, and our reasons for wanting to understand them will all have a distinct influence on how quickly and how well we understand them.

A QUICK GLIMPSE AT ENGLISH

WORD-FORMATION

English words can be formed in various ways and from various sources. There are, as we know, major processes of word-formation and minor ones. The following is a brief illustration.

I . Major Processes of Word-Formation

Processes such as derivation (also called affixation), conversion and composition (also known as compounding) are major processes in word-formation.

Derivation means that you add an affix or affixes to a root or an existing word. For example, when you add the prefix “anti-” to the existing word “cancer”, you get a new word “anti-cancer”; you can also get a new word “teacher” by adding the suffix “-er” to the verb “teach”. Conversion refers to the process in which a word of one word class is shifted into another word class, without the addition of an affix. Look at the following examples: “to cripple (VERB) a fool (NOUN)”, “to fool (VERB) a cripple (NOUN)”. The words “cripple” and “fool” change their word class and function as they are put in different positions of the phrase. This is a process of conversion. Compounding is a process of word-formation by which two or more independent words are put together to form a new word, e. g. , “do-what-you-can-and-take-what-you-need”.

II . Minor Processes of Word-Formation

Minor processes of English word-formation include acronymy, clipping, blending, back-formation, reduplication, neoclassical formation, imitation and formation from proper names.

1. Acronymy is a process of building new words from initial letters to indicate a name, an institution or others, e. g. , TOEFL stands for “Test of English as a Foreign Language”, and GRE comes from “Graduate Record Examination”.
2. Clipping means that you simply cut off a part of a word to make it more convenient to use or read. Take “ad”, which is a short form of “advertisement”; and “rock” is shortened from “rock-and-roll”.
3. Blending is a process in which parts of at least two words are combined to create a new word. Examples are “brunch” for “breakfast + lunch”, “FORTRAN” for “formula translation”, “news-cast” for “news broadcast”, “medicare” for “medical care”, etc.
4. Back-formation is a process of word-formation by which a word is created by the deletion of a supposed affix. In other words, a kind of shortening occurs, sometimes, because a long word looks as if it had been made from a shorter one, e. g. , “televise” has come from “television” (which exists earlier than “televise”), “automate” is from “automation”, and “emote” from “emotion”.
5. Reduplication is a word-formation process by which a new word is created by the repetition of one

word or two almost identical words, e. g. , “so-so”, “willy-nilly”, “fiddle-faddle”, “zig-zag”, etc.

6. Neoclassical formation is a process by which new words, mostly scientific and technical, are formed from elements derived from Latin and/or Greek, e. g. , “astrophysics”, “callisthenics”.
7. Imitation, also known as onomatopoeia, refers to the formation of a word which imitate or echo a sound or voice, e. g. , “neow” of a cat, “bark” of a dog, “jingle” of a bell.
8. Formation from proper names is a process by which a new word is created from a proper name, e. g. , “watt”, “nicotine”, “China”, “champagne”, “xerox”, “Shylock”, etc.

In addition to the aboved mentioned major & minor word-formation processes, new words can also be built by means of coinage, which is merely an invention of a word. For instance, “pizzazz” is recently used to refer to a person with exciting attractiveness, and “quark” is the name for an imaginary particle bearing a charge of electricity. Further, borrowing is another way of enlarging English vocabulary. Therefore, “pizza” is from Italian, “silk” from Chinese, “bourgeois” from French, and “kindergarten” from German. There are still other ways in which new words can be formed. The ways listed above are the most common ones. You can have a deeper understanding of them through exercises.

1

The Main Idea

What is the most important element in any paragraph? The main idea. Perhaps the best way to understand main idea is to think of it as the central idea, or the most important idea, in a paragraph. Simply stated, if there is no main idea in a paragraph, there is no paragraph. A candle provides an example to explain the above. At its center is a wick without which there is no candle, just a lump of wax.

A paragraph represents a basic unit of meaning. If this were not so, a letter to a friend or a job application could be written using one long paragraph, and an essay, or a novel could consist of one continuous paragraph. Obviously, this would be awkward and confusing. A paragraph, therefore, should express and develop one main idea. If a new main idea is introduced, it should be expressed and developed in a separate paragraph thus preserving each paragraph's basic unit of meaning.

One sentence in a paragraph expresses the main idea; the other sentences explain, develop, or support it. The sentence stating the main idea of a paragraph is called a topic sentence. A topic sentence expresses a concept whose full meaning and significance are developed and made clear by the supporting details.

More often than not, the topic sentence is the first sentence of a paragraph which normally follows a straight line of development. Paragraph with its topic sentence at the beginning can be represented by an upsidedown or inverted triangle since it starts with a broad statement, the topic sentence, and continues with supporting sentences of diminishing importance.

Sometimes a topic sentence is located at the end of a paragraph. Positioning the topic sentence at the end of a paragraph is common practice whenever a difficult or unpopular idea is discussed or when the purpose of the paragraph is to persuade and convince. A paragraph whose topic sentence comes last can be represented by a regular triangle. In this case, the supporting details progress in order of least important to more important till they all come together in the topic sentence at the base of the triangle.

Occasionally, the topic sentence is located towards the middle of a paragraph. This style of paragraph can be represented within a diamond shape outline. Even if the topic sentence were off-center, the paragraph would still be considered diamond-shaped.

Anyhow, the main idea is the most important idea and it gives the paragraph purpose and direction. Every well-written paragraph has purpose and direction. The purpose may be to inform, define, explain, give directions, narrate an event, persuade, compare, contrast, etc. Its direction is usually single-minded; it seeks to focus on the main idea.

1. Identify the Following to Be True or False:

- () 1. If one wants to understand a paragraph well, one should try to get at the topic sentence

quickly because it gives the main idea of the paragraph.

- () 2. A candle is taken as an example to show the importance of giving the main idea in writing a paragraph.
- () 3. Contrast is the exhibition of difference. Compare is the same.
- () 4. The shape of the diamond to show the position of the topic sentence must be perfect and regular. The topic sentence can never be the second or the next to the last sentence of a paragraph.
- () 5. The sign ∇ shows that the topic sentence is at the beginning of the paragraph.

II. Cloze:

You have had _____ long, hard day at school. Your first words as you open the door _____, "I had a miserable day." This statement can _____ considered a topic sentence which expresses a main idea. You may then add supporting details _____ explain why your day was miserable. "My car wouldn't start this morning _____ I arrived late for an important exam. I'm sure the nervous state I was _____ will affect my grade. To top it off, Jane gave me _____ cold shoulder."

The preceding paragraph can be represented by _____ upsidedown or inverted triangle _____ it starts with a broad statement, the topic sentence, and continues _____ supporting sentences of diminishing importance.

III. Word Formation:

Words ending in -able and -ible are spelling nightmares because their endings sound alike. The -able words (adjective) have related -ably (adverb) and -ability (noun) forms and the -ible words (adjective) have related -ibly (adverb) and -ibility (noun) forms. Many more words end in -able than in -ible. An a for an a and an i for an i:

adaptation	adaptable	accession	accessible
admission	admissible	application	applicable
audition	audible	consideration	considerable
combustion	combustible	dispensation	dispensable
duration	durable	compression	compressible
explication	explicable	corruption	corruptible
deduction	deductible	impregnation	impregnable

2

Inference

Efficient reading requires the use of many comprehension skills, one of which is making an inference. In making an inference, the reader is required to reach a decision based on evidence he

thinks to be true. One language authority defines inference simply as a statement about the unknown made on the basis of the known.

In our everyday lives we make many inferences. When we deal with people, watch television, or drive a car, we make inferences. The following everyday experiences will make this point clear.

--You wave good-morning to an old friend, but he does not respond. You might infer that she is angry, upset, lost in thought, or does not see you.

--While driving along the highway at night, you notice flashing yellow lights. You might infer that there has been an accident. Also, you might decide that you should slow down.

Sometimes making inferences helps us solve common problems. For example, in the morning you might ask yourself, "How Should I dress today?" Through the window you notice icicles hanging from the edge of the roof, cloudy skies, and your neighbor across the street putting a snow shovel into his car. You infer that it might snow and you should dress warmly.

In these situations and in many others like them, we make decisions based on what we think is true. Without the ability to make inferences, a person is unresponsive to the subtleties of life. He can not interpret situations or see beyond them.

In a similar way, a reader who is unresponsive to the subtle uses of language can not fully understand or appreciate what he reads. He makes no distinction, for example, between the words "slim", "delicate", "skinny", and "emaciated". To him, they mean "thin" and nothing more.

The perceptive reader, on the other hand, understands that these words have different shades of meaning. "Slim" means "thin", but it is complimentary. "Delicate" suggests frailty as in "a small, delicate person". "Skinny" means very thin, but it is uncomplimentary. "Emaciated" suggests thinness due to starvation.

A good reader is sensitive to these sometimes hidden meanings of words. He reads beyond the lines, seeing the ideas implied through such words. Just as a pianist knows he cannot play Beethoven's Fifth Symphony using only his right hand, a skillful reader knows that he can not read with complete comprehension unless his understanding goes beyond the obvious.

Making inferences challenges the mind to work on a high level. It forces the mind to bridge the gap between the obvious and the suggested, between the stated and the unstated. Such effort requires careful reading and thinking, but rewards the reader with better and more complete understanding.

I . Identify the Following to Be True or False :

- () 1. Inferences are common in a wide variety of reading situations. In fact, nearly everything we read contains some kind of inference.
- () 2. When you see the yellow traffic lights are flashing, someone must have been killed.
- () 3. If you want to point out to your friend that she is thin and should try to get some weight, you'd better say: "I think you should take some heavy food, you are really slim. "
- () 4. The words "law and order" mean security to some people and oppression to other people. The dictionary does not always give correct definitions.

- () 5. A good reader would be sensitive to the hidden meanings of words from the very beginning, he does not have to challenge his own mind while training his reading ability.

II. Cloze:

So deeply is metaphor entrenched in the vocabulary _____ we are scarcely conscious of it _____ the individual word. Indeed, many words are _____ commonly used out of their literal sense, that the mental picture they once suggested to _____ reader and writer is blurred and obscured; they are metaphorically dying _____ dead.

Yet, metaphor is not _____ verbal matter, _____ shifting and displacement of words, but _____ natural outcome of thought. It is native to and part of all expression in speech and writing, _____ it can effectively organize _____ unify a paragraph or even a group of paragraphs.

III. Word Formation:

The suffix-*-aceous* derives from the Latin-*-aceus* meaning;

1. characterized by, consisting of;
2. of or relating to a group of animals typified by a form or characterized by a feature, or of relating to a plant family typified by a genus; For example;

crust-aceous	ros-e/-aceous	ament-aceous	arbor-aceous
aster-aceous	cet-aceous	mor-aceous	orchid-aceous
pale-aceous	palm-aceous	seb-aceous	pin-aceous
spin-aceous	foli-aceous		

3

Making Generalization

Two important reading skills are retaining concepts and organizing facts. Both require the reader to recognize facts and details and form meaningful generalizations. As is the case with all comprehension skills, good concentration is also important.

Retaining concepts and organizing facts are closely related. Both skills depend on the reader's ability to pinpoint facts, minor ideas, and supporting details as well as main ideas. And both ask the reader to combine specific facts into summary statements, restatements, and generalizations.

The two skills are related in other ways. Organizing facts is slightly more complex than retaining concepts because the reader must understand the order in which the writer presents his facts and ideas. A perceptive reader must mentally organize facts, ideas, and events into a whole, following the author's suggested pattern, before he can interpret these as general concepts.

Retaining concepts can be explained further this way: to retain something is to remember it. A concept is a general idea. Thus, retaining concepts means remembering broad, general ideas. General ideas are formed from reading the facts, ideas, and events presented by the author. A writer, for ex-

ample, might say that in one particular Civil War battle, 24 Northern troops lost their lives. Fifty men in blue were injured, and only six Northerners escaped injury and death. Northern supplies and weapons were also lost in the encounter.

Here we must first realize that all the figures pertain to Northern men. One should remember that two dozen Northern troops were killed. Two dozen is easier to remember than the number 24. The reader must also remember that slightly more than double two dozen—fifty—were injured. Half a dozen escaped. We interpreting these numbers in terms which makes them easier to remember. Mentally, we should combine the number to be 80. We can now remember these interpreted figures and generalize that the Southern troops won the skirmish and inflicted heavy losses on the Northern troops. The universal theme; man can kill if it suits his needs, also emerges. We have thus formed several generalizations by mentally combining facts.

Also in this brief example, the writer has listed his figures in order of importance. He mentioned deaths first, then injuries, then escapees. The mention of supply losses was reserved for last place because the status of men is always more important than material things. A good reader is quick to recognize the author's pattern of presentation.

Since the mental processes and reading techniques required to use the two skills are nearly identical, we will group them both together under the heading, "making generalizations."

It will not be necessary for you to make a distinction between these skills beyond this point. You will be able to use them simultaneously in your reading.

I. Identify the Following to Be True or False:

- () 1. In the above passage, the writer listed the important matters first.
- () 2. "Pinpoint" is used metaphorically to mean "locate, define, or focus on precisely."
- () 3. If one can successfully retain the concepts and organize facts in reading, concentration is of second importance.
- () 4. To relate facts according to their importance in order is the best method of writing.
- () 5. Generalizations can be made through retaining concepts and organizing facts.

II. Cloze:

_____ is a judgment? A judgment is a reasonable and sound decision based on evidence. Notice _____ we said "a reasonable decision"; we did not say "the only decision". Different judgments can be made based _____ the same evidence. It is possible, for example, for two people to view _____ same cloudy sky on _____ same morning. One might judge that the day will be rainy _____ decide to bring his umbrella with him to work. The other might judge that the clouds will pass and that the day will _____ sunny. He might leave the house with _____ raincoat nor umbrella. Only the future, the actual weather conditions of the day will reveal _____ decision was the best one. From the evidence viewed by both men in the morning, _____ either judgment could be valid.

III. Word Formation: