

根据最新《大学英语教学指南》编写

总主编 向明友

# New Voyage

## 新起航大学英语

### College English

主 编 杨瑞英

## 读写教程

### Reading and Writing

# 4



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# PREFACE 总序

自 20 世纪五六十年代我国开启大学英语教学以来,出于社会不同发展阶段的不同需求,受制于不同的客观实际,基于不同人的不同理解,就大学英语教什么、教多少、如何教的问题,从教育主管部门到学界一直存在不同的声音。反映在大学英语教材建设上,文革前有《文科英语》《理科英语》和《高等工业学校英语》的三足鼎立;从文革结束到 20 世纪 80 年代中叶仍然延用《英语》(供理科用)、《英语》(高等学校文科非英语专业教材)及《英语》(供工科用)的三足模式;伴随 1985 年和 1986 年分别供理工科和文理科使用的两份《大学英语教学大纲》的先后颁布,《大学英语》《大学核心英语》《新英语教程》及《现代英语》等教材应运而生;随着 1999 年大学外语教学指导委员会对原理工科和文理科两份《大学英语教学大纲》的修订、合并完毕,尤其是 2007 年《大学英语课程教学要求》的问世,国内《新编大学英语》《21 世纪大学英语》《全新版大学英语》《新视野大学英语》《现代大学英语》《新世纪大学英语》等教材如雨后春笋般涌现。群雄并起的大学英语教材编写战可谓一路硝烟。如今,大学英语的内涵已不再是一门大学英语课所能包含的,其工具性和人文性的双重特质不断得以彰显;其作为我国高等学校人文教育一部分的功能已为大家所认知;其量大面广的优势已成为不争的事实。致力于指导和规范我国大学英语教学的《大学英语教学指南》(简称《指南》)即将面世。《指南》呼吁构建“服务于学校办学目标、院系人才培养目标和学生个性化发展需求”的新的大学英语课程体系,倡导“can do”理念,提出“基础”、“提高”和“发展”三级教学目标,推荐“通用英语”、“专门用途英语”和“跨文化交际”三大教学内容。修正旧问题,应对新要求,建设服务于新的大学英语课程体系的新教材已成为我国大学英语教育工作者无法回避的重要使命。因应这一新的形势,在上海交通大学出版社的推动下,我们策划出版《新起航大学英语》系列教材。该系列教材由《读写教程》《泛读教程》和《听说教程》等三套主干教材和一套《阅读》辅助教材构成,每套教材分别包括四个分册。

我们认为,英语更多是学生学出来的,不完全是教师教出来的。学好英语的关键是学生的内生动力,而非单靠教师的课堂操劳。在英语学习过程中,教师仅发挥组织教学、引导学习的教练作用。一套好的教材对帮助教师组织课堂,激发学生学习积极性、主体

性有着不可替代的作用。依循英语学习规律,编写一套力求简单、明了,突显趣味性、科学性、思辨性和时代性的大学英语教材,既能激发学生的内生动力,又能满足大学英语教学新内涵的要求。

《新起航大学英语》系列教材中的《读写教程》《听说教程》和《泛读教程》等三套主干教材撇开应试干扰,着重培养学生的英语应用能力。《阅读》辅助教材旨在巩固学生英语知识的同时,引导学生熟悉和适应国家级英语水平考试。本系列教材参照《大学英语教学指南》“基础”和“提高”阶段的教学目标要求,按每周4个学时设计。

《读写教程》在系统讲解英语构词、语法、修辞、文体知识的基础上,着重训练学生“读”、“写”能力,兼顾“说”的能力,并适时导入跨文化交际、学业英语及批判思维元素。

《听说教程》为引进改编教材,旨在培养学生英语“听”、“说”能力,兼顾“写”的能力。教材在保留原版教材生动鲜活语料的基础上,通过改编使之契合整套系列的理念、定位和目标。

《泛读教程》旨在培养学生良好的阅读习惯和有效的阅读技巧,在重点提升学生阅读能力,兼顾“说”、“写”训练的同时,扩大学生知识面,补充学生学习和工作所需的专门用途英语知识,课文选题涵盖自然科学、社会科学、人文素养及工程技术等五十余个学科。

《阅读》作为教辅,既是《读写教程》的延伸补充,又是对国家级英语水平考试的训练。本教辅围绕《读写教程》的单元主题设计阅读题目,题型向国家级考试靠拢,同时体现《大学英语教学指南》的要求与精神。

本套教材具有定位明确、目标清晰、手段具体、可操作性强等特点。我们按照不同规格高校人才培养的不同需求,把本套教材的服务对象明确定位为“985”院校的非英语专业学生。三套主干教材遵照《大学英语教学指南》有关“基础”和“提高”阶段大学英语教学要求,以“can do”为目标,训练学生用英语交流和思辨,增强学生跨文化交际意识和交际能力,培养学生批判思维能力,提升学生综合文化素养,丰富学生专门用途英语知识,倡导并向学生输入正确价值观,鼓励学生不仅学会用英语讲述西洋风情,

还要会用英语介绍中国故事,可谓目标清晰;本系列教材启用听、说、读、背、咏、辩、写等多种训练手段,多管齐下,多模态综合,操练手段十分具体;本系列教材以《读写教程》为龙头,以《听说教程》和《泛读教程》为主体,形成教材主干,集知识、素养、能力提升于一体,着力增强学生英语应用能力、思辨能力和跨文化交际能力,把《阅读》列为辅助教材,引导学生掌握国家级考试的相关要求,这样既务实,又可操作。

针对教材服务对象的客观实际,我们综合参照高中英语选修1课程要求和“Collins Co-build”基础词表,核准本教材的起点词汇,不追求英语词汇量的盲目扩大,也不赶长难句的时髦,注重新知识的系统循序导入,严把词汇及知识点的重现率,让学生能够温故知新,以简单、有趣和省力来激发学生学习英语的内生动力。

感谢本套教材的全体主创人员,正是得益于大家的共同努力,本套教材才能够按计划如期面世。上海交通大学出版社领导对这套大学英语系列教材的出版提供了可贵支持,我向他们致以最真挚的敬意!

向明友

2016年3月于北京

# INTRODUCTION 编写说明

作为《新起航大学英语》系列教材的主干教材,《读写教程》由四册构成,供我国非英语专业本科生“基础”和“提高”阶段的英语教学使用,按每周4个学时设计,重点培养英语“读”、“写”能力,同时兼顾“说”的能力。在着重加强大学生英语应用能力培养的基础上,本教材同时兼顾培养其人文素养、思辨能力和跨文化交际能力;通过给学生提供同一主题下不同观点或不同视角的文章,引导学生多角度思考问题,树立正确的价值观;通过为学生提供相关主题下有关“中国”的内容,鼓励他们用英语说中国的事。本册教材适用于非英语专业本科生“提高”阶段的英语教学。

与同类教材相比,本套教材偏易,求精。《读写教程》编写的重点不在于学生对语言知识的占有,而在于学生语言应用技能的习得。其中第四册的编写原则是:以语篇为核心,融合“阅读理解—思辨能力—文体与修辞—衔接与连贯—体裁与写作”五大元素,同时兼顾在语境中的词汇学习,最终实现写作能力和英语综合应用能力的提高。

本册共有八个单元,每单元分为 Text A, Text B, Knowledge Empowering, Integrated Exercises 和 Culture Express 五个部分,其中两篇课文平均长度为1200字左右,生词量约为5%;Text A 之后的主客观阅读理解练习旨在帮助学生掌握篇章主旨、具体细节及对隐含的思维逻辑及引申意义的把握;Text B 之后通过详尽的语篇结构分析或修辞特点分析以及背诵要求来培养学生的篇章写作能力。本册 Knowledge Empowering 部分分为 Vocabulary Building, Rhetoric and Writing, Cohesion and Coherence, Genre and Writing, 始终贯穿“词汇—修辞策略—语篇衔接—体裁知识为篇章写作服务”的原则。Integrated Exercises 提供针对 Text A、Text B 以及 Knowledge Empowering 内容的强化练习,通过分点、分层面、分模块的“任务型”操练,使学生掌握相应的词汇、修辞、衔接和体裁知识,最终实现篇章写作。Culture Express 部分则提供相近主题下有关中国文化的短篇,旨在提高学生的跨文化比较意识并为学生进行跨文化交际提供素材。

《读写教程》第四册主编为西安交通大学杨瑞英,副主编为葛冬梅;参加编写的教师有西安交通大学杨瑞英、陈琦、葛冬梅、严亮和靳蓉以及西安文理学院褚亮。其中杨瑞英负责第一单元,陈琦负责第二单元,葛冬梅负责第三、四单元,严亮负责第五单元,褚亮负责第六单元,靳蓉负责第七和第八单元。外籍教授 Frank Lovell (美)和 Marsha Lovell (美)对本册英文部分做了文字审定。总主编向明友教授对全书进行了审定并提出了修改意见。

编者

2016年6月



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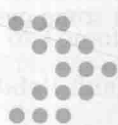
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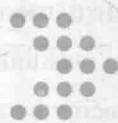
# UNIT 1

## Exploration and Discovery



### Text A

#### The Discovery of Insulin



### Text B

#### “Seven Minutes of Terror,” Eight Years of Ingenuity

## Text A

### Pre-reading Thought

Every great advance in science has issued from a new audacity of imagination.

—John Dewey

### Lead-in Questions

1. How do you interpret the statement above? Do you agree with John Dewey's idea?
2. Do you know the function of insulin and how it was discovered?

## The Discovery of Insulin

- 1 Before the discovery of **insulin**, **diabetes** was a feared disease that most certainly led to death. Doctors knew that sugar worsened the condition of diabetic patients and that the most effective treatment was to put the patients on very strict diets where sugar intake was kept to a **minimum**. At best, this treatment could buy patients a few extra years, but it never saved them<sup>1</sup>. In some cases, the harsh diets even caused patients to die of **starvation**.
- 2 During the nineteenth century, observations of patients who died of diabetes often showed that the **pancreas** was damaged. In 1869, a German medical student, Paul Langerhans<sup>2</sup>, found that within the **pancreatic** tissue that produces **digestive** juices there were clusters of cells whose function was unknown. Some of these cells were eventually shown to be the insulin-producing beta cells. Later, in honor of the person who discovered them, the cell clusters were named the **islets** of Langerhans.
- 3 In 1889 in Germany, **physiologist** Oskar Minkowski<sup>3</sup> and physician Joseph von Mering<sup>4</sup>, showed that if the pancreas was removed from a dog, the animal got diabetes. But if the duct through which the pancreatic juices flow to the intestine

was **ligated** — surgically tied off so the juices couldn't reach the intestine — the dog developed minor digestive problems but no diabetes. So it seemed that the pancreas must have at least two functions:

To produce digestive juices

To produce a substance that regulates the sugar **glucose**

- 4 This **hypothetical** internal **secretion** was the key<sup>5</sup>. If a substance could actually be isolated, the mystery of diabetes would be solved. Progress, however, was slow.

### Banting's Idea

- 5 In October 1920 in Toronto, Canada, Dr. Frederick Banting<sup>6</sup>, an unknown surgeon with a bachelor's degree in medicine, had the idea that the pancreatic digestive juices could be harmful to the secretion of the pancreas produced by the islets of Langerhans<sup>7</sup>.

- 6 He therefore wanted to ligate the pancreatic ducts in order to stop the flow of nourishment to the pancreas. This would cause the pancreas to degenerate, making it shrink and lose its ability to secrete the digestive juices. The cells thought to produce an **antidiabetic** secretion could then be **extracted** from the pancreas without being harmed.

- 7 Early in 1921, Banting took his idea to Professor John Macleod<sup>8</sup> at the University of Toronto, who was a leading figure in the study of diabetes in Canada. Macleod didn't think much of Banting's theories. Despite this, Banting managed to convince him that his idea was worth trying. Macleod gave Banting a laboratory with a minimum of equipment and ten dogs. Banting also got an assistant, a medical student by the name of Charles Best. The experiment was set to start in the summer of 1921.

### The Experiment Begins

- 8 Banting and Best began their experiments by removing the pancreas from a dog. This resulted in the following:

It's blood sugar rose.

It became thirsty, drank lots of water, and **urinated** more often.

It became weaker and weaker.

9 The dog had developed diabetes.

10 Experimenting on another dog, Banting and Best surgically ligated the pancreas, stopping the flow of nourishment, so that the pancreas **degenerated**.

11 After a while, they removed the pancreas, sliced it up, and froze the pieces in a mixture of water and salts. When the pieces were half frozen, they were ground up and filtered. The isolated substance was named “isletin”.

12 The extract was injected into the diabetic dog. Its blood glucose level dropped, and it seemed healthier and stronger. By giving the diabetic dog a few injections a day, Banting and Best could keep it healthy and free of symptoms.

13 Banting and Best showed their result to Macleod, who was impressed, but he wanted more tests to prove that their pancreatic extract really worked.

#### **Extended Tests**

14 For the increased testing, Banting and Best realized that they required a larger supply of organs than their dogs could provide, and they started using pancreases from cattle. With this new source, they managed to produce enough extract to keep several diabetic dogs alive.

15 The new results convinced Macleod that they were onto something big. He gave them more funds and moved them to a better laboratory with proper working conditions. He also suggested they should call their extract “insulin”. Now, the work proceeded rapidly.

16 In late 1921, a third person, biochemist Bertram Collip<sup>9</sup>, joined the team. Collip was given the task of trying to purify the insulin so that it would be clean enough for testing on humans.

17 During the intensified testing, the team also realized that the process of shrinking the pancreases had been unnecessary. Using whole fresh pancreases from adult animals worked just as well.

#### **Testing on Humans**

18 The team was eager to start testing on humans. But on whom should they

test? Banting and Best began by injecting themselves with the extract. They felt weak and dizzy, but they were not harmed.

- 19 Collip continued his work to purify the insulin. He also experimented with trying to find the correct **dosage**. He learned how to **diminish** the effect of an insulin overdose with glucose in different forms. He discovered that the glucose should be as pure as possible. Orange juice and honey are good examples of foods rich in glucose.

- 20 In January 1922 in Toronto, Canada, a 14-year-old boy, Leonard Thompson, was chosen as the first person with diabetes to receive insulin. The test was a success. Leonard, who before the insulin shots was near death, rapidly regained his strength and appetite. The team now expanded their testing to other volunteer diabetics, who reacted just as positively as Leonard to the insulin extract.

### **The Nobel Prize<sup>10</sup>**

- 21 The news of the successful treatment of diabetes with insulin rapidly spread outside of Toronto, and in 1923 the Nobel Committee decided to award Banting and Macleod the Nobel Prize in **Physiology or Medicine**.

- 22 The decision of the Nobel Committee made Banting furious. He felt that the prize should have been shared between him and Best, and not between him and Macleod. To give credit to Best, Banting decided to share his cash award with him. Macleod, in turn, shared his cash award with Collip.

- 23 The Nobel Prize in Physiology or Medicine for insulin has been much debated. It has been questioned why Macleod received the prize instead of Best and Collip. However, Macleod played a central role in the discovery of insulin. It was he who supported the project from the beginning. He supervised the work and it is also most likely that Macleod's contacts in the scientific world helped the team in getting a speedy recognition of their discovery.

### **The Legacy of Insulin**

- 24 Banting, Macleod, and the rest of the team patented their insulin extract but gave away all their rights to the University of Toronto, which would later use the income from insulin to fund new research.

25 Very soon after the discovery of insulin, the medical firm Eli Lilly<sup>11</sup> started large-scale production of the extract. As soon as 1923, the firm was producing enough insulin to supply the entire North American continent.

26 Although insulin doesn't cure diabetes, it's one of the biggest discoveries in medicine. When it came, it was like a miracle. People with severe diabetes and only days left to live were saved. And as long as they kept getting their insulin, they could live an almost normal life. (1,246 words)

## New Words and Expressions

(The symbol © suggests a word required by Band 4 College English Test, and the symbol ★ Band 6. The words without symbols are not required by CET. Words marked with 5 stars are very frequently used, words with less stars are less frequently used, and words without stars are the least used.)

段落	词汇	词性	级别	词频	释义
1	insulin /'ɪnsjʊlɪn/	n.		1 star	the substance that controls the level of sugar in blood 胰岛素
1	diabetes /daɪə'bi:tɪz/	n.		2 stars	a disease in which the body cannot control the level of sugar in the blood 糖尿病
1	minimum /'mɪnɪmə/	n.		3 stars	the least possible amount, degree, or quantity 最低限度; 最小量
1	starvation /stɑ:'veɪʃn/	n.		2 stars	the state of having no food for a long period, often causing death 挨饿; 饥饿
2	pancreas /'pæŋkriəs/	n.		1 star	an organ in the body that produces insulin and substances that help to digest food so that it can be used by the body 胰, 胰腺
2	pancreatic /pæŋkri'ætɪk/	adj.			relating to the pancreas 胰腺的
2	digestive /daɪ'dʒestɪv/	adj.	★		relating to the digestion of food 消化的; 助消化的
2	islet /'aɪlət/	n.			one of many groups of cells in the pancreas that produce hormones such as insulin 胰岛
3	physiologist /fɪzɪ'ɒlədʒɪst/	n.			a scientist who studies physiology 生理学家
3	ligate /lɪ'geɪt/	v.			tie up; join 结扎, 绑



段落	词汇	词性	级别	词频	释义
3	glucose /'glu:kəʊs/	n.		1 star	Glucose is a type of sugar that gives you energy. 葡萄糖
4	hypothetical /haɪpə'θetɪkl/	adj.		1 star	If something is hypothetical, it is based on possible ideas or situations rather than actual ones. 假设的
4	secretion /sɪ'kri:ʃn/	n.			Secretion is the process by which certain liquid substances are produced by parts of plants or from the bodies of people or animals. 分泌; 分泌物
6	antidiabetic /æntɪdaɪə'betɪk/	adj.			of drugs treating diabetes by lowering glucose levels in the blood 抗糖尿病的(药物); 抗糖尿病药
6	extract /'ekstrækt/	v.	★	2 stars	To extract a substance means to obtain it from something else, for example by using industrial or chemical processes. 提取; 获得
8	urinate /'juərɪneɪt/	v.		1 star	When someone urinates, they get rid of urine from their body. 排尿, 撒尿
10	degenerate /dɪ'dʒenəreɪt/	v.	★	1 star	If you say that someone or something degenerates, you mean that they become worse in some way, for example, weaker, lower in quality, or more dangerous. 使退化; 衰减
19	dosage /'dəʊsɪdʒ/	n.		1 star	A dosage is the amount of a medicine or drug that someone takes or should take. (药物等的) 剂量
19	diminish /dɪ'mɪnɪʃ/	v.	★	2 stars	When something diminishes, or when something diminishes it, it becomes reduced in size, importance, or intensity. 减少, 缩小
21	physiology /'fɪzi'ɒlədʒi/	n.		1 star	Physiology is the scientific study of how people's and animals' bodies function, and of how plants function. 生理学; 生理机能
24	give away				If you give away something that you own, you give it to someone, rather than selling it, often because you no longer want it. 赠送