

ENGLISH FOR  
INFORMATION  
RETRIEVAL  
**情报检索英语**

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# 前 言

在不久的将来,我国科技工作者和工程师在进行科学研究时,很多地方必须应用科技英语和信息检索技术,才能通过计算机终端从与世界各地相连的计算机网络中获得领域有关的重要信息。也就是说,科技英语、基本的计算机知识和信息检索技术不仅紧密相关,而且也将有机地结合成一种通用的工具。这一工具对于我国科技工作者和工程师胜任将来的工作是必不可少的。

在我国,随着信息时代的到来,经济体制和政治体制改革的深入,国家教委已经强调理工科大学生应当接受应用计算机基础知识和科技英语知识的基本训练。理工科大学生学习英语的主要目的是扩展他们自己查找和利用信息的能力。大学英语教学必须紧跟世界科学技术的新发展,以使培养的学生将来能够高效率地工作,完全胜任激烈的竞争,并为我国乃至世界的发展作出贡献。为此,国家教委已要求各个大学开设英语专业阅读课,以使大学生在一、二年级学完公共英语课程以后,能继续进行英语学习,使英语教学不断线。

根据国家教委的这些要求,我们尝试性地编写了两本书,名为《情报检索英语》和《计算机技术和应用》英语,以便满足教学的需要。这两本书在科技英语阅读技能教学方面互为补充。它们包括了国家教委规定的各项阅读技能。第一册《情报检索英语》讲解了

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参阅技能、总体浏览和定题查找等；第二册《计算机技术和应用》英语讲解了图表理解、摘要撰写和翻译要点等。然而，每本书也相对独立，可以根据需要选用一本。第一册的重点是介绍如何以英语作为信息检索手段。该书不仅能使学生懂得信息检索的基本概念，也能使学生了解科技英语的特点，为掌握和运用信息检索技能奠定基础。第二册介绍计算机软硬件的基本概念、主要部件的原理、计算机技术的发展史和新成就，并对世界上各种最新应用作了简介。该书的内容覆盖了当代大学生和科技工作者应当掌握的计算机的基本知识和操作技能，遵循理工科《计算机导论》课程教学大纲的要求。

两本书的主要特点是它们适用于理工科大学的各个学科领域，能满足专业英语阅读课程的教学要求。两册书把科学知识学习和专门的语言技能训练结合起来同步进行；选材真实，覆盖范围广；真实材料的合理选择和精心组织使只有中等英语水平的大学生和工程技术人员能较容易地理解和掌握。大量的各具特色的阅读材料和情景教学任务，也展示了英语词汇的多种用法，可进一步提高读者理解真实的科技英语文章和检索主要信息的能力。我们真诚希望两本书在以英语为媒介获取科学知识和技能的训练中发挥作用。

两本书的另一个特点是为 60% 以上的练习提供了参考答案（附在书末）。这使两本书也可以用来自学。另外，无论是经过正规教学还是自学，读者不难发现书中不少资料可以留作工作时参考。

对于专业阅读课来说，材料的选择是极其重要的。Hutchinson and Waters 在 1992 年提出的六条选材原则，指导我们完成了这两本书的编写。它们是：

1. 材料可激发学习兴趣。好的材料不必教，它本身就能鼓励学习者不断学习；

2. 好的材料应提供清晰的条理结构, 能指导教师和学生通过各种活动增加学习机会;

3. 材料能完整地具体地体现语言的特色和学习过程的特点;

4. 材料能反应学习任务的性质, 并使努力使学习任务的复杂性和可管理性取得平衡;

5. 材料通过给教师介绍新技术, 能对拓展教师的知识起到积极作用;

6. 材料能提供正确的合适的语言运用的模型。

根据上述原则, 用于这两本书的素材全部选自英文书籍、报刊和杂志, 并依照知识内容本身的体系结构和我们的教学经验进行系统的组织和编排。因此, 本教材可望达到 Nuttall 所说的“使学生在没有任何帮助的情况下能阅读不熟悉的真实资料”。

《情报检索英语》这本书由五个单元组成, 分别讨论各种英语阅读技能和信息检索技能。正如 David 在 1986 年指出的, 阅读技能包括四个方面:

1. 认识词汇的含义;

2. 获取推理的结论;

3. 识别作者使用的技巧和每段的语气;

4. 寻找问题的答案。

本书正是从这四个方面组织材料培养阅读技能的。而对培养检索技能来说, 本书的课文, 采取从一般到特殊、从简单到复杂, 逐步深入的方式进行组织, 系统地介绍了各种情报源和情报检索方法。本书的五个单元是:

**第一单元 情报源简介** 本单元介绍书籍的结构和特点, 也介绍阅读技巧, 如怎样从书的封页说明、前言和简介中获取相关信息。本单元也提供了各种快速阅读的练习和提高阅读速度的经验。

**第二单元 图书馆简介** 本单元介绍图书馆服务的发展趋

势,侧重介绍了怎样应用传统方法利用图书馆的资料。在语言学习方面,讲述了上下文参照、概念定义和事物分类的方法。这些技能在两本书各个单元所提供的练习中将反复训练,以便读者能够熟练应用。

**第三单元 参考工具书** 本单元介绍重要的参考工具书,例如百科全书、传记辞典、各种地图、地名辞典和年鉴等。举例说明、比较对比和顺序关系表达方法等等在语言学习材料中也作了详细讲解。

**第四单元 检索工具书** 本单元和第三单元类似,着重介绍著名的传统检索工具书。这些工具书主要用于专门信息或资料的手工检索。而与时间有关的过程或事件的表达方法以及信息的组织方法等也在语言学习中进行了介绍。

**第五单元 国际互联网** 本单元讲述国际互联网 INTERNET 的基本知识、结构和用途。详细说明了怎样使用电子邮件,并对 Archie、WAIS、Gopher、World Wide Web 等信息查询工具作了简要说明。重要的语言技能训练在本单元继续进行,以便巩固。

上述语言技能学习已合理地分成了多个 Language Focus,系统地安排到各个单元。读者可从中得到帮助,以便解决阅读英语科技文章时常遇到的困难。

专业英语阅读是一门必修课,在大学教学第五个学期到第七个学期开设,每周至少二学时,由相关专业的教师主讲。这两本书分别在第五、第六学期使用。学习本课程的学生应该已学完两年公共英语,并至少已经通过大学英语三级考试。这两个条件对于在校学习的大学生来说,是完全必要的。也可以这样理解,开始学习本课程的学生至少应该具有这样的英语水平:对一般的阅读材料如《中国日报(英)》,每分钟阅读 45 个词而理解的正确率达到 70% 以上。如没有这样的英语基础,就会有不少困难,可能跟不上教学进度;或者可能使教学计划无法在两个学期内完成。

在编写这两本教材的三年里,我们得到了重庆大学外国语学院韩其顺教授的热忱鼓励、指导和多方面的大力帮助,借此机会表示衷心感谢。我们还要感谢贵州大学计算机科学系 91、92、93 和 94 级学生对教材的组织和教学方法的改进所提出的宝贵建议。另外,贵州大学图书馆的年青教师蒋磊和图书情报科学系的学生在材料整理和计算机输入、校对等方面做了大量的细致的工作,在此深表感谢。

编 者

一九九七年六月  
于贵阳花溪

# Preface

In the coming years, Chinese scientists and engineers will have to use science English and computer terminals to do much of their research work and be able to obtain pertinent information in their particular fields of research, through a variety of information retrieval skills from computer network systems linked throughout the world. In other words science English, basic computer knowledge, and information retrieval skills are not only closely related to each other but will also become a universal integral tool, which is indispensable for Chinese scientists and engineers to be competent in their future work.

In China with the coming of the information age and the development of both economical and political reform, the CSEC (Chinese State Education Commission) has been increasingly emphasizing that the university students majoring in science and technology should receive basic training in both fundamental computer knowledge and science English. A primary aim of English learning for these students, therefore, is to develop their abilities in both retrieving and using information. Universities must also keep abreast of latest science and technology developments around the world so that they can assist their students to become more fully prepared for both their fu-



ture competitive working careers, and as valuable citizens contributing more efficiently and effectively to their country's, and by extension the world's, development. The CSEC has asked all universities to develop courses in specialized reading so that students can continue their training in English after they complete the general English courses offered in their first and second year at university.

In attempting to meet these needs the present writers have tentatively written two books, namely *English for Information Retrieval* and *English for Computer Technology and Application* which follow the guidelines set by the CSEC. These two books complement each other in the training of science English study skills. They include the reading skills stipulated by the CSEC. Book one *English for Information Retrieval* covers: reference skills, surveying, locating information, etc.; Book two *English for Computer Technique and Applications* covers: understanding graphic presentation, abstract writing, and translation principles etc. Each book can, however, be studied independently of the other according to the reader's special needs. The first book lays emphasis on the use of English as a means of information retrieval. It helps students develop the ability to understand and handle not only basic information retrieval concepts, but also specific English language features, which are common to and important in all manner of science and technology information retrieval skills. The second book introduces the basic concepts, main components (including both hardware and software), the history of and latest developments in computer technology, and also gives a general review of a wide variety of its applications in current times around the world. The basic computer knowledge covered in this book is what is necessary for university students and today's

engineers to gain an essential knowledge of and some practical skills in computer science. This book follows the "Introduction to Computer Science" syllabus, for education in science and technology.

A main feature of both books is their suitability, over all academic fields, for the "Special Reading Course" offered by universities of science and technology. This is because: the study of science knowledge has been simultaneously combined with the training of specific language skills; the authentic materials selected cover a wide range of relevant materials; and finally because these authentic materials were chosen so that they can be easily understood by students and engineers with only an intermediate English level. The wide variety of reading materials and situations tasks, also illustrate how English words are used in a variety of ways, and furthermore develop the students' ability to read authentic English articles and at the same time retrieve information. It is the present writers sincere hope that these two books can be successfully used in training readers to acquire greater knowledge and skills in science and technology through the medium of the English language.

Another feature of these two books is that the answers to more than 60% of the tasks are provided for reference at the end of each book, so that other interested readers may even make use of the book as material for individual self-study. Indeed students who complete their course of study, whether formally or informally, will enjoy keeping these books at home or in their future places of work or research as an valuable reference volumes for years to come.

The reading materials are the most important element in the specialized reading course. There are six principle (Hutchinson and Waters, 1992) which guided us in the actual writing of these books.

1. Materials provide a stimulus to learning. Good materials do not teach: they encourage learners to learn.
2. Good materials should provide a clear and coherent unit structure which will guide teacher and learner through various activities in such a way as to maximize the chances of learning.
3. Materials embody a view of the nature of language and learning.
4. Materials reflect the nature of the learning task and should try to create a balanced outlook which both reflects the complexity of the task, yet makes it appear manageable.
5. Materials can have a very useful function in broadening the basis of teacher training, by introducing teachers to new techniques.
6. Materials provide models of correct and appropriate language use.

All materials used in these two books are carefully chosen from English books, Journals or newspapers according to the six principles mentioned above, and are arranged systematically according to the content of knowledge itself and our own teaching experience. So they can be used to "enable students to read without help unfamiliar authentic understanding" (Nuttall, 1982).

This book, *English for Information Retrieval*, consists of five units which deal with different levels of English reading skills and information retrieval skills. As David (1986) points out, reading skills include four aspects:

1. identifying word meanings,
2. drawing inferences,
3. identifying the writer's technique and recognizing the mood of a passage,
4. finding answers to questions.

For reading skills, the materials are organized following these

aspects. And for information retrieval skills, these texts are arranged from general and simple sources of information and retrieval methods to specific and complex ones. The five units are as follows.

**Unit One The Information Sources** This unit introduces basic knowledge about a book's construction and features, reading skills, such as how to understand the purpose of a book from its foreword, preface, or introduction; and provides a variety of hints on reading practice and fast reading skills.

**Unit Two About Libraries** This unit introduces the trends in library service and emphasizes how to use a library by traditional methods. In language focuses, the skills for contextual reference, making definition, and classification are introduced. These skills return repeatedly throughout the book to ensure that students develop these disciplines.

**Unit Three Reference Books** This unit gives an introduction to the reference books such as encyclopedias, biographical dictionaries, atlases, gazetteers, yearbooks and so on. Giving examples, Making comparisons/contrasts and Listing are also explained in detail.

**Unit Four Abstracts and Indexes Journals** This unit as well as Unit Three focus on various well-known traditional reference sources which can be used to retrieve particular information by hand. The language study skills, such as how to express procedures or events in relation to time and how to organize information, are also discussed.

**Unit Five The Internet** This unit introduces basic knowledge about the Internet, e. g., its structure and usage. And the basic skills in using the Internet and the well-known tools on it, such as the exchange of e-mail with your friends, the function of Archie, WAIS, Gopher, and World Wide Wed are given too. Some impor-

tant language skills' training are included in the tasks of this unit for consolidation.

The language study skills mentioned above are arranged in several Language Focuses which appear in each unit so as to help readers to cope with general language problems in reading science articles in English.

The specialized reading course is intended to be a compulsory course and will be offered from the 5th semester on through the 7th, at least two hours a week, by the relevant subject teachers. These two books can be used in the 5th and 6th semesters respectively. Students attending this course must have learned general English for two years and have passed College English Test – Band Three or higher. These two pre-requisites are essential for university students. That is to say, for the general reading materials such as *China Daily*, the students or the readers before embarking on this course should be able to read general English materials at a speed of no less than 45 words per minute with at least 70% accuracy in comprehension. Without this basis they might have difficulties in keeping up or completing the required tasks, and it may be impossible for them finish the two books within the two semesters.

We are grateful to Professor Han Qishun at the Foreign Languages College of Chongqing University for his great encouragement and valuable advice in the procedure of writing these books. Also we appreciate students of grades 91, 92, 93 and 94 in the Computer Science Department of Guizhou University for their precious suggestions about the organization of the materials and the improvement of teaching methods. Special thanks to Jiang Lei, a young teacher in the library of Guizhou University and students in the Library and

Information Science Department of Guizhou University for their careful work in making the manuscripts of the books readable on computers. To all, our thanks.

The Editors

July 1, 1997

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