



工业和信息化高职高专“十二五”规划教材立项项目

工业和信息化人才培养规划教材

高职高专计算机系列

# 实用计算机英语



## Practical English for Computer

最实用的IT英语场景对话

最新、最实用的IT英语时文

计算机专业、技能与职业三位一体的英语教学模式

李一 湛邵斌 孙洁 ◎ 主编

[英] Alan Thomson Hewat ◎ 审



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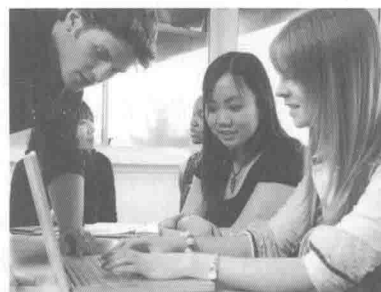


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## 内 容 提 要

本书充分借鉴了当今国外和国内 ESP(专门用途英语)教学的研究成果并结合计算机专业和英语教学的特点,以培养高职计算机专业学生基于岗位的实际英语交际能力和应用能力为出发点,以培养学生可持续发展的职业核心竞争力为目标,是一本为高职计算机专业学生量身打造和精心编制的计算机英语教材。教材共分为14个章节。其具体内容包括:计算机硬件、软件、操作系统、编程语言、数据库、网络、即时通讯、计算机安全、多媒体、电子商务、计算机新技术等计算机专业内容,并涵盖了 Android 操作系统、云计算、物联网等当前计算机领域最新的技术和概念。此外本书还围绕每章节的话题增加了情景对话、职业技能、职场点滴(包括职业规划、职场规则、简历撰写、面试技巧)等内容,并在每章节的最后设计了具有很强实践性和实操性的活动,全方位训练和提高学生面向行业、企业岗位需求,在真实工作环境中的英语交际能力、应用能力和学习能力。

本书可作为高职高专院校计算机英语教材,也可作为相关从业人员自学参考用书。

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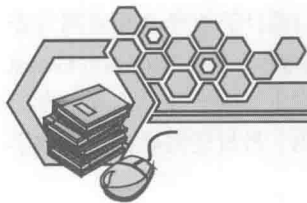
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- ◆ 主 编 李 一 湛邵斌 孙 洁  
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随着世界计算机科学技术的飞速发展以及我国计算机产业国际化进程的日益加快,对计算机行业技术从业人员专业英语能力的要求也越来越高。在此背景下,高职的计算机英语教学在其作用和功能上逐渐趋向于“实用化”,其目标也逐渐趋向于侧重学生“面向行业、企业岗位需求,在真实工作环境中的英语交际能力、应用能力和学习能力的培养”,以提升学生的就业竞争力和可持续发展的职业核心竞争力。

计算机英语属于 ESP (专门用途英语) 的范畴,也属于跨专业、跨学科的一门语言课程。本书的编写充分借鉴了当今国外和国内 ESP 教学的研究成果和经验并结合计算机专业和英语教学的特点,以培养高职计算机专业学生基于岗位的实际英语交际能力和应用能力为出发点,以培养学生的可持续发展的职业核心竞争力为目标,是为高职计算机专业学生量身打造和精心编制的一部计算机英语教材。本书是由长期从事高职计算机英语教学、具有丰富教学和实践经验的一线教师团队共同开发的。本团队既有计算机专业的教授、副教授、海外归国的博士,又有长期从事 ESP 教学研究的英语专业教师。双方的合作实现了专业的互补和互融,充分发挥了团队协作的优势。

本书在借鉴以往优秀高职计算机英语教材的基础上,破除了传统计算机专业英语教学中片面注重科技文本阅读和翻译的倾向;针对高职学生的英语学习兴趣和特点,在英语教学的教学理念、教学目标、教学方法等进行新的思考和探索;在 ESP 的教学理念的指导下进行教材和编写和开发;在 EAP (学术英语) 的基础上融入了更多的 EOP (职业英语) 的内容,具有鲜明的职业特色和实用性,具体表现在以下几个方面。

一、增加听说环节:加入“情景对话”内容,模拟真实场景编写与计算机行业和职业岗位相关的对话内容,以听说为引导,将学生带入 IT 职场英语交际真实语境,激发学生的英语学习兴趣,调动学生参与的积极性。

二、在阅读环节对于阅读材料进行认真筛选,在国外权威报刊、杂志以及网站上选取最新、最实用且有趣味性的计算机信息和材料,充分体现 ESP 语料的“真实性”原则。本书还按照英语学习材料的难易程度和重要程度进行篇章 (Text A、Text B、Text C) 的划分,教师可根据学生具体的情况进行选讲,以解决高职学生因英语基础薄弱、层次参差不齐带来的教学上的困难。

三、加入“职场点滴”环节,以英语职场“小贴士 (Tips)”的形式根据章节的主题向学生介绍相关的计算机行业职场规则和 IT 企业文化,开阔学生的视野,为学生进入职场做好铺垫。在此环节中,编者还根据学生需求,特别加入了 IT 行业英文简历写作、IT 行业面试技巧、IT 行业职业规划等内容,真正实现学校英语学习与 IT 职场的无缝对接。

四、加入课堂活动部分,设计生动有趣且实操性强的课堂活动,着力体现了“学”、“做”一体的教学理念,将英语学习融入技能实操的过程中,利用多元智能法激发学生学习动机,同时培养学生团队协作能力和人际交往能力。

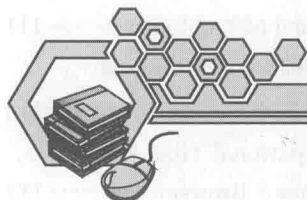
五、配合网络资源利用 ICT (Information and Communication Technology) 技术与教学的融合,发展网络环境下的高职专业英语交际型教学的新模式,通过任务驱动、网络探究、网络平台交流互动、网络互动多媒体展示等方法全面提升高职学生的英语专业交际能力和应用水平,提升学生的终身学习能力。



本书在编写过程中得到了多位深圳 IT 界资深行业专家的指导,并由中国计算机学会互联网专委会、北京外国语大学计算机系老师陈福博士后及英国中央兰开夏大学外籍教师 Alan Thomson Hewat 进行校审,力图在编写上突出计算机英语的职业性和实用性特色,并在质量上精益求精。但是,专门用途英语是属于实践性和探索性很强的一类课程,我们的《实用计算机英语》教材还需要在以后教学中不断检验并进行修正,请各位读者不吝赐教并提出宝贵意见!

编者

2012 年 5 月



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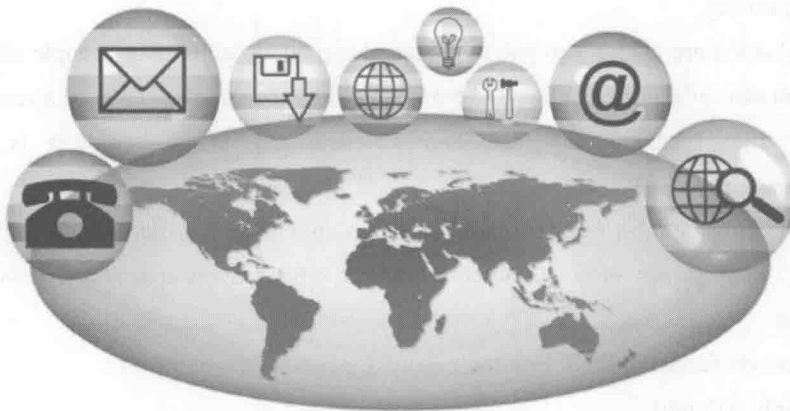


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# Unit 1

## The Development of Computer Technology



### Outline

In this unit, we are focusing on the following issues:

- computer technology and people's lives;
- the five generations of computers and the significant advancements in technology of each generation;
- different types of computers;
- the future of computers;
- tips on how to start your career in Information Technology.

Professional Terminology: vacuum tube; IBM (International Business Machines Corporation); transistor; integrated circuit (IC); silicon chip; personal computer (PC); central processing unit (CPU); desktop computer; laptop computer; Personal Digital Assistant (PDA); mainframe; minicomputer; supercomputer; artificial intelligence (AI)

## Section 1

## Dialogue: The Impact of Computers on People's Lives

**Directions:** Read the following dialogue in pairs and talk about the impact of computers on people's lives.

*Situation: Two students on campus are talking about the relationship between computers and people's lives.*

**Jessie:** Hi, Bill! Have you noticed that nowadays computers are much more involved in people's lives?

**Bill:** I do agree with you. Computers are people's indispensable companions helping us do things.

**Jessie:** Yes, I always use my computer to connect to the Internet to surf the web. It's even a daily routine for me.

**Bill:** The same thing for me, I can't imagine my life without a computer.

**Jessie:** Of course not! I read news stories and movie reviews, and get the weather forecast nearly every evening.

**Bill:** And what's more, with a computer you can also send e-mail to many people simultaneously, and you can save, print and forward e-mail to others. You don't even need a stamp!

**Jessie:** That's true! Listening to music and watching movies on computer is really good entertainment for me!

**Bill:** Do you know the most wonderful thing I like to do with a computer? That's to play computer games. Many games allow you to compete with other players around the world through the Internet.

**Jessie:** That sounds fantastic! Well, just don't spend too much time on it!

**Bill:** I certainly will not!





## Section 2 Reading

**Directions:** Read Text A and finish the exercises for Text A.

### Text A: The Evolution of the Computer Age

The Computer Age did not really begin until the first computer was made available to the public in 1951. The modern age of computers spans almost 50 years, which is typically broken down into five generations. Each generation is marked by a significant advancement in technology:

**First Generation (The Vacuum Tube Age 1951-1957):** During this generation, computers were built with vacuum tubes—electronic tubes that were made of glass and were about the size of light bulbs. These computers were expensive and bulky. They used machine language for computing and could solve just one problem at a time. In the year 1951, the first commercially available electronic digital computer was introduced to the public, which marked the first generation computers came into being. IBM (International Business Machines Corporation), today a big name in the list of computer technology industries, announced the IBM 702 Electronic Data Processing Machine in 1953. It was developed for business use and could address scientific and engineering applications.

**Second Generation (The Transistor Age 1958-1963):** This generation began with the first computers built with transistors—small devices that transferred electronic signals across a resistor. Because transistors were much smaller, use less power, and created less heat than vacuum tubes, the new computers were faster, smaller, and more reliable than the first-generation machines were. In the 1960s, transistor based computers replaced vacuum tubes. Transistors made computers smaller and cheaper. They made computers energy-efficient. The use of transistors marked the second generation of computers.

**Third Generation (The Integrated Circuit Age 1964-1969):** In 1964, computer manufacturers began replacing transistors with integrated circuits. An integrated circuit (IC) is a complete electronic circuit on a small chip made of silicon. These computers were more reliable and compact than computers made with transistors, and they cost less to manufacture. What's more, the use of the new types of computer increased the speed and efficiency of computers. In the year 1965, Digital Equipment Corporation (DEC) introduced the first minicomputers.

**Fourth Generation (The Microprocessor Age 1970-1990):** There were many key advancements that were made during this generation, the most significant of which was the use of the microprocessor—a specialized chip developed for computer memory and logic. This revolutionized the computer industry by making it possible to use a single chip to create smaller personal computers. Microprocessors came up during the 1970s. Intel produced large-scale integration circuits in 1971. Apple Computer, Inc., founded by Steve Wozniak and Steve Jobs, brought out the Macintosh personal computer in 1984.



Microsoft, a company founded by a young Harvard drop-out named Bill Gates, who wrote the programming language BASIC for one of the earliest microcomputers, introduced their Windows graphical user interface in the year 1985.



Figure 1. Minicomputer



Figure 2. Microcomputer

**Fifth Generation (The Age of Connectivity 1990 and beyond):** Our current generation has been referred to as “Connected Generation” because of the industry’s massive effort to increase the connectivity of computers. The rapidly expanding Internet, World Wide Web, and intranets have created an information highway that has enable both computer professionals and home computer users to communicate with others across the globe. What’s more, presently the computers would be capable of massive parallel processing, support voice recognition and understand natural language. The current advancements in computer technology are likely to transform computing machines into intelligent ones that possess self organizing skills. The evolution of computers will continue, perhaps till the day their processing powers equal human intelligence.

### New Words & Expressions:

advancement

n. 进步

vacuum tube

n. 真空管

bulky

adj. 庞大的; 笨重的; 肥大的

transistor

n. 晶体管



integrated circuit ( IC )

n. 集成电路

chip

n. 芯片

silicon

n. 硅

microprocessor

n. [计] 微处理器

World Wide Web ( WWW )

n. 万维网

connectivity

n. [计] 连通性

intranet

n. 内部网络; 专用网

programming language

n. 编程语言

intelligence

n. 智力; 智能

## Exercises

I. Answer the following questions according to the text.

1. When did the Computer Age really begin?

2. What are the five generations of computer age?

3. What is the significant advancement in technology of each generation?

4. Who is the founder of Microsoft Corporations? What do you think is his main contribution to the computer world?

5. Why has the current age been referred to as “Connected Generation”?

II. Decide whether the following statements are true or false.

( ) 1. During the first generation, computers were built with vacuum tubes—electronic tubes that were made of glass and were about the size of light bulbs.

( ) 2. IBM 702 Electronic Data Processing Machine was developed for military use and could address scientific and engineering applications.

( ) 3. In the 1970s, transistor based computers replaced vacuum tubes.

( ) 4. An integrated circuit (IC) is a complete electronic circuit on a small chip made of silicon.

( ) 5. The current generation has been referred to as “Connected Generation” because of the industry’s massive effort to increase the connectivity of computers.

**Directions:** Read Text B and finish the exercises for Text B.

## Text B: Different Types of Computers

A computer is one of the most brilliant inventions of mankind. Thanks to the computer technology, we were able to achieve an efficient storage and processing of data; we could rest our brains by employing computer memory capacities for storage of information. Owing to computers, we have been able to speed up daily work, carry out critical transactions and achieve accuracy and precision in work. Computers of the earlier years were of the size of a large room and were required to consume huge



amounts of electric power. However, with the advancing technology, computers have shrunk to the size of a small watch. Depending on the processing power and size of computers, they have been classified under various types. Following are some important types of computers.

**Mainframe Computer:** Large organizations use mainframes for highly critical applications such as bulk data processing and ERP. Most of the mainframe computers have the capacities to host multiple operating systems and operate as a number of virtual machines and can thus substitute for several small servers.



Figure 3. Mainframe Computer

**Microcomputer:** A computer with a microprocessor and its central processing unit is known as a microcomputer. They do not occupy space as much as mainframes. When supplemented with a keyboard and a mouse, microcomputers can be called personal computers. A monitor, a keyboard and other similar input/output devices, computer memory in the form of RAM and a power supply unit come packaged in a microcomputer. These computers can fit on desks or tables and serve as the best choices for single-user tasks.

Personal computers come in a variety of forms such as desktops, laptops and personal digital assistants. Let us look at each of these types of computers.

**Desktop:** A desktop is intended to be used on a single location. The spare parts of a desktop computer are readily available at relative lower costs. Power consumption is not as critical as that in laptops. Desktops are widely popular for daily use in workplaces and households.

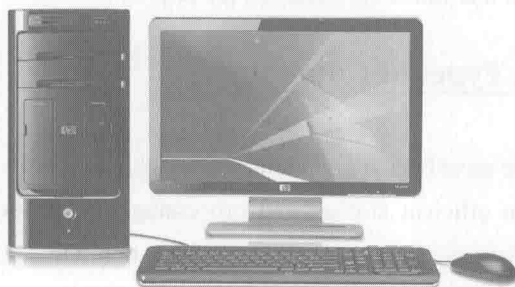


Figure 4. Desktop Computer



**Laptop:** Similar in operation to desktops, laptop computers are miniaturized and optimized for mobile use. Laptops run on a single battery or an external adapter that charges the computer batteries. They are enabled with an inbuilt keyboard, touch pad acting as a mouse and a liquid crystal display. Its portability and capacity to operate on battery power have served as a boon for mobile users.



Figure 5. Laptop Computer

**Personal Digital Assistant (PDA):** PDAs are handheld computers and popularly known as palmtops. They have got touch screen and a memory card for storage of data. PDAs can also be effectively used as portable audio players, web browsers and smart phones. Most PDAs can access the Internet by means of Bluetooth or Wi-Fi communication.

**Minicomputer:** In terms of size and processing capacity, minicomputers lie in between mainframes and microcomputers. Minicomputers are also called mid-range systems or workstations. The term began to be popularly used in the 1960s to refer to relatively smaller third generation computers. They took up the space that would be needed for a refrigerator or two and used transistor and core memory technologies. The 12-bit PDP-8 minicomputer of the Digital Equipment Corporation was the first successful minicomputer.



Figure 6. Personal Digital Assistant (PDA)

**Supercomputer:** The highly calculation-intensive tasks can be effectively performed by means of supercomputers. Quantum physics, mechanics, weather forecasting, molecular theory are best studied by means of supercomputers. Their ability of parallel processing and their well-designed memory hierarchy give the supercomputers large transaction processing powers.



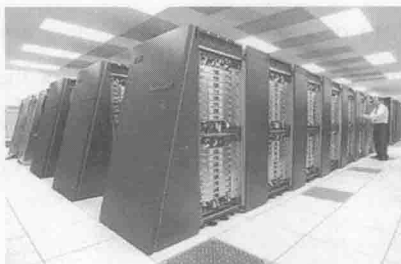


Figure 7. Supercomputer

**Wearable Computer:** A record-setting step in the evolution of computers was the creation of wearable computers. These computers can be worn on the body and are often used in the study of behavior modeling and human health. Military and health professionals have incorporated wearable computers into their daily routine, as a part of such studies. When the users' hands and sensory organs are engaged in other activities, wearable computers are of great help in tracking human actions. Wearable computers are consistently in operation as they do not have to be turned on and off and are constantly interacting with the user.



Figure 8. Wearable Computer

These were some of the different types of computers available today. Looking at the rate of the advancement in technology, we can definitely look forward to many more types of computers in the near future.

### New Words & Expressions:

ERP

abbr. 企业资源计划 (=Enterprise Resource Planning)

mainframe

n. 主机; 大型计算机

central processing unit

n. 中央处理机 (CPU)

desktop computer

n. 台式计算机

laptop computer

n. 膝上型计算机; 便携式电脑

PDA

abbr. 个人数字助理 (=Personal Digital Assistant)

minicomputer

n. 微型计算机

supercomputer

n. 巨型电子计算机

wearable computer

n. 可穿戴的计算机



## Exercises

### I. Fill in the blanks according to the text.

1. \_\_\_\_\_ is a handheld computer and popularly known as a palmtop.
2. \_\_\_\_\_ can be worn on the body and are often used in the study of behavior modeling and human health.
3. In terms of size and processing capacity, \_\_\_\_\_ lie in between mainframes and microcomputers.
4. \_\_\_\_\_ run on a single battery or an external adapter that charges the computer batteries.
5. A \_\_\_\_\_ is intended to be used on a single location.

### II. Decide whether the following statements are true or false.

- ( ) 1. The spare parts of a desktop computer are readily available at relative higher costs.
- ( ) 2. Most of the supercomputers have the capacities to host multiple operating systems and operate as a number of virtual machines and can thus substitute for several small servers.
- ( ) 3. PDAs can also be effectively used as portable audio players, web browsers and smart phones. Most of them can access the Internet by means of Bluetooth or Wi-Fi communication.
- ( ) 4. Quantum physics, mechanics, weather forecasting, molecular theory are best studied by means of minicomputers.
- ( ) 5. Wearable computers are consistently in operation as they do not have to be turned on and off and are constantly interacting with the user.

**Directions:** Read Text C and finish the exercises for Text C.

## Text C: The Future of Computers

As anyone who has looked at the world of computers lately can attest, the size of computers has been reduced sharply, even as the power of these machines has increased at an exponential rate. In fact, the cost of computers has come down so much that many households now own not only one, but two, three or even more PCs.

As the world of computers and computer technology continues to evolve and change, many people, from science fiction writers and futurists to computer workers and ordinary users, all have wondered what the future holds for the computer and related technologies. Many things have been pictured, from robots in the form of household servants to computers so small that they can fit in a pocket. Indeed, some of these predicted inventions have already come to pass, with the introduction of PDA's and robotic vacuum cleaners.

Beyond these innovations, however, there are likely to be many, many more. One of the most important areas of research in the world of computers is that of artificial intelligence. When many people think of artificial intelligence, they may picture fully aware machines, complete with emotions, and the