

21世纪高等学校计算机**基础**实用规划教材

# 计算机英语实用教程

吕云翔 编著



清华大学出版社

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北京

## 内 容 简 介

本书是面向计算机及相关专业英语课程的教材,内容涉及深刻影响着人们生活的信息技术,包括最新的科研成果、业界前沿课题和发展趋势,以及计算机文化典故和名人轶事。本教材信息量大,知识性强,注重英语的听、说、读、写、译能力的全面培养和实际应用。各章内容均分为阅读与翻译、写作、听说三大部分;采用场景式教学和体验式学习相结合的方式,融合了角色扮演、多人会话和小组讨论等行之有效的训练方法。

本书适合国内各高等院校计算机、软件工程等相关专业教学之用,也可作为其他相关专业或IT领域人员的自修参考用书。

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# 前 言

本教材是按照最新《大学英语教学大纲》，为各类高校和职业学校开设的计算机英语课程而编写的，适用于计算机相关专业学生和广大从事计算机相关工作的在职人员。

本教材选材广泛，内容丰富。全书共分为 12 个单元，分别从计算机的基本介绍、系统的硬件、系统的软件、操作系统、计算机编程、管理数据库、网络和通信、万维网和因特网的基础知识、电子商务、可靠和安全地管理计算、软件工程和数字世界等方面，全面介绍和讲解深刻影响着人们生活的信息技术，内容既包含最新的科研成果、业界前沿课题和发展趋势，又有计算机文化典故和名人轶事。

本教材在对话场景的编排上以三位计算机专业大学本科生 Mark、Henry 和 Sophie 的学习生活为主要背景，他们交流的话题围绕各章主题展开，并在对话中丰富各章主题，将全书内容巧妙地联系在一起。

本教材信息量大，知识性强，注重英语的听、说、读、写、译能力的全面培养和实际应用。各章内容均分为阅读与翻译、写作、听说三大部分。

本教材采用场景式教学和体验式学习相结合的方式，教材中设计的听力、口语、阅读与翻译和写作练习融合了角色扮演、多人会话和小组讨论等行之有效的训练方法，能较好地满足课堂教学的需要。

另外，本教材提供有配套的 MP3 音频材料，录音聘请专业人员录制，可为学生提供非常有价值的口语与听力模板。配套的 MP3 音频材料以及教学 PPT 可以在清华大学出版社的网站 [www.tup.com.cn](http://www.tup.com.cn) 本书网页免费下载。

本教材建议教学时长为 48 学时或 32 学时（可根据具体情况进行适当的取舍）。理论授课包括课堂讨论、练习等必要的课内教学环节。建议授课时间比例为听说部分 50%、阅读部分 30%、写作部分 20%。

本教材在编写的过程中，得到了美国专家 Eric Langager 的指导，以及杨雪的大力支持，在此一并表示衷心的感谢。

本教材试图融合听、说、读、写、译各项技能训练，书中难免会有不尽如人意之处，敬请专家与读者不吝赐教，以使该书臻于完善（yunxianglu@hotmail.com）。

编 者

2014 年 9 月于北京

# 教学建议

本教材共有 12 个单元，每个单元的训练都分为读与译、模拟写作、听与说几个部分。读与译部分包括计算机相关的基础知识、相关的最新的科研成果、业界前沿课题和发展趋势；写作部分讲解如何撰写商务文档等；听力部分概要讲述与计算机相关的知识、计算机文化典故和名人轶事，对话部分围绕各章的主题来交流如何运用计算机相关的知识；各部分还附有形式多样的练习，并提供详细的写作样例。针对各部分的教学，教师可采用如下方式：

**阅读与翻译部分 (Reading & Translating)：**教师可让学生阅读文章（教师可根据文章的长短和难易程度来设定阅读的时间），并完成文章后的练习。之后教师公布练习答案，并讲解文章后的单词表、短语表、缩写词和注释来帮助学生进一步理解这篇文章。另外，教师最好还要讲解一下这篇文章所涉及的计算机相关知识。如果课堂时间不够，可将 Section B 作为学生课后的作业。

**模拟写作部分 (Simulated Writing)：**教师可先让学生阅读写作方法指导，并配合本教材的写作样例进行讲解和指导。教师还可根据写作部分的练习，让学生根据写作指导并参照写作样例进行模拟写作。如果课堂时间不够，教师可建议学生课下自学“写作部分”。

**对话部分 (Dialogue)：**教师可先让学生听对话录音，并以提问的方式，引导学生根据所听信息概括对话主要内容，让学生了解和学习对话中涉及的相关知识。然后，教师可将学生分成三人小组，让其中一组或两组（分别）朗读这个对话，并纠正学生的发音；或让一组或两组参照已有对话并通过替换对话下面的场景，组织完成一个类似的对话，并对学生完成的情况加以点评。

**短文听力理解部分 (Listening Comprehension)：**教师可先让学生听短文录音和短文后的问题，让学生根据所听内容选择正确的答案。若播放一遍短文学生感觉有难度，教师可酌情增加录音播放次数。教师最后公布答案，并且讲解相应的单词、短语、缩写词和句子，解释这篇短文的重点和难点。另外，可让学生阅读一遍原文。

**听写部分 (Dictation)：**教师可根据实际情况播放 1~3 遍短文录音，让学生根据所听内容填空，将文章补充完整。文章填充完整后，教师最后公布答案，并且讲解相应的单词、短语、缩写词和句子，解释这篇短文的重点和难点。另外，可让学生阅读一遍原文。

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# Basic Introduction to Computers

## Part 1 Reading and Translating

### ➤ Section A Cloud Computing

There is a lot of buzz about **cloud computing** these days, and its scope continues to evolve. Cloud computing is a concept, rather than a specific technology. It is the idea that consumers use their computers or handheld devices to access applications, storage, and other computing resources supplied by Internet-based servers, rather than from their local devices.

In general, the term cloud computing refers to computing in which tasks are performed by a “cloud” of servers, typically via the Internet. This type of network has been used for several years to create the supercomputer-level power needed for research and other power-hungry applications, but it was more typically referred to as **grid computing** in this context. Today, cloud computing typically refers to accessing Web-based applications and data using a personal computer, mobile phone, or any other Internet-enabled device (Figure 1-1). The concept of cloud computing is that apps and data are available any time, from anywhere, and on any device. For example, you use cloud computing capabilities when you store or access documents, photos, videos, and other media online; use programs and apps online (i.e., email, productivity, games, etc.); and share ideas, opinions, and content with others online (i.e., social networking sites).



Figure 1-1 Cloud computing

While many of today’s cloud applications (such as Google Apps, Windows Live, Facebook, and YouTube) are consumer-oriented, other cloud applications (such as computing power or storage space available **on demand**, and online sales or service applications) are designed

specifically for businesses. Businesses often use applications available in the **public cloud**; they also frequently create a **private cloud** just for data and applications belonging to their company.

The biggest advantages of cloud computing include the ability to access data from anywhere the user has access to an active Internet connection and, since data is stored online instead of on the device being used, the data is safe if the device is lost, stolen, or damaged. In addition, Web-based applications are often less expensive than installed software. Disadvantages of cloud computing include a possible reduction in performance of applications if they run more slowly via the cloud than they would run if installed locally, and the potentially high expense related to data transfer for companies and individuals using high-bandwidth applications.<sup>[1]</sup> There are also security concerns about how safe the stored online data is from unauthorized access and data loss. Despite the potential risks, many believe that cloud computing is the **wave** of the future.

Home and business users choose cloud computing for a variety of reasons:

- **Accessibility:** Data and/or applications are available worldwide from any computer or device with an Internet connection.
- **Cost savings:** The expense of software and high-end hardware, such as fast processors and high-capacity memory and storage devices, shifts away from the user.
- **Space savings:** Floor space required for servers, storage devices, and other hardware shifts away from the user.
- **Scalability:** It provides the flexibility to increase or decrease computing requirements as needed.

Cloud computing allows companies to **outsource**, or **contract** to third-party providers, elements of their information technology infrastructure. They pay only for the computing power, storage, bandwidth, and access to applications that they actually use. As a result, companies need not make large investments in equipment, or the staff to support it. Consumers and organizations rely on cloud computing services to manage IT infrastructure (Infrastructure as a Service), provide applications (Software as a Service), access online data (Data as a Service), and create applications using Web-based development platforms (Platform as a Service).

## Words

### buzz

[bʌz] *n.* 时髦的 (词语、想法或活动)

### productivity

[ˌprɒdʌk'tɪvɪti] *n.* 办公软件, 生产率, 生产力

### business

['biznis] *n.* 企业, 商业, 交易, 生意, 事务, 业务, 职业, 行业

### wave

[weɪv] *n.* 汹涌的行动 (或思想) 态势, 涌现的人 (或事物), 波浪

### high-end

[haɪ end] *adj.* (尤指电子产品) 最高档的, 高端的, 最昂贵的

### shift

[ʃɪft] *v.* 摆脱掉, 改变, 去掉, 换挡

### scalability

[ˌskeɪlə'bɪlɪti] *n.* 可扩展性, 可伸缩性, 可量测性

### outsource

['aʊtsɔːs] *v.* 外包 (工程)

### contract

[kən'trækt] *v.* 承包, 订契约

**infrastructure**

['ɪnfəstrʌktʃə] *n.* 基础设施, 基础建设

**Phrases**

cloud computing	云计算
grid computing	网格计算
on demand	经要求, 点播
public cloud	公有云
private cloud	私有云

**Notes**

[1] **Original:** Disadvantages of cloud computing include a possible reduction in performance of applications if they run more slowly via the cloud than they would run if installed locally, and the potentially high expense related to data transfer for companies and individuals using high-bandwidth applications.

**Translation:** 云计算的缺陷包括, 当应用在云端的运行速度太低于本地的运行速度时, 云计算可能会降低应用的性能, 以及包括对于使用高带宽公司和个人来说, 与数据传输相关的潜在的高费用。

**Exercises**

**I. Read the following statements carefully, and decide whether they are true (T) or false (F) according to the text.**

- \_\_\_ 1. Cloud computing is a specific technology.
- \_\_\_ 2. Cloud computing is the idea that consumers use their computers or handheld devices to access applications, storage and other computing resources from their local devices.
- \_\_\_ 3. Cloud computing typically refers to accessing Web-based applications and data using a personal computer, mobile phone, or any other Internet-enabled device.
- \_\_\_ 4. Web-based applications are often more expensive than installed software.
- \_\_\_ 5. Home and business users do not choose cloud computing due to its high expense.

**II. Choose the best answer to each of the following questions according to the text .**

1. Which of the following is wrong about the cloud computing?
  - (A) Cloud computing is a concept.
  - (B) Accessing Web-based applications and data is by using a personal computer, mobile phone, or any other Internet-enabled device.

- (C) Cloud computing is a specific technology.  
 (D) The concept of cloud computing is that apps and data are available any time, from anywhere, and on any device.
2. Which of the following is wrong about choosing cloud computing for home and business users?
- (A) Cost savings  
 (B) Space savings  
 (C) Scalability  
 (D) High expense
3. Which of the following is right about buss today?
- (A) Data processing  
 (B) Personal computing  
 (C) Network computing  
 (D) Cloud computing

### III. Translate the following sentences according to the text.

1. It is the idea that consumers use their computers or handheld devices to access applications, storage, and other computing resources supplied by Internet-based servers, rather than from their local devices.
2. The biggest advantages of cloud computing include the ability to access data from anywhere the user has access to an active Internet connection and, since data is stored online instead of on the device being used, the data is safe if the device is lost, stolen, or damaged.

### IV. Fill in the blanks with the words or phrases chosen from the box. Change the forms where necessary.

worth	garage	nomination	know
cofound	raise	charismatic	innovative
motivational	patent		

#### STEVE JOBS—Apple and Pixar Cofounder

Apricot orchards once grew in the area 1 today as California's Silicon Valley. Steve Jobs was 2 in this area, but he has found his fruit of choice to be an Apple. As Apple's CEO, Jobs continued to use his 3 personality and 4 skills to lead the company and lists himself on 5 applications as the co-inventor of more than 100 Apple products.

Jobs cofounded Apple in 1976 in his parents' 6 with Steve Wozniak. Five years later, he was 7 \$200 million and on the cover of Time magazine at the age of 26. By that time he had helped build the first desktop personal computer, marketed an 8 operating system, and 9 the Apple Computer Corporation.

Jobs also cofounded Pixar Animation Studios, which merged with The Walt Disney Company in 2006. Pixar and its employees have received more than 100 awards and 10.

### V. Translate the following passage into Chinese.

#### SAMSUNG ELECTRONICS—Top Consumer Electronics Manufacturer



Products branded as “Wow, Simple, Inclusive” are part of SAMSUNG Electronics’ presence as the world’s leading consumer electronics company. Based in Seoul South Korea, SAMSUNG manufactures more than 60 categories of products including flash memory, plasma monitors, mobile devices, laser printers, and home appliances.

The company was founded in 1969 and originally manufactured electronic home appliances such as televisions, refrigerators, washers, and air conditioners. It merged with Samsung Semiconductor & Communications in 1988 and has grown to become the world’s second largest cell phone manufacturer.

The company introduced the world’s slimmest watch-phone device in 2009. This device features a full touch screen that allows users to stay connected. By 2013, Samsung Electronics plans to be a leading eco-friendly company.

## ➤ Section B Touch Screen Technology: How the Screen Is So Smart

Touch screen technology is becoming a larger part of everyday life for many individuals. As we know, a touch screen is a touch-sensitive display device that users can interact with by touching areas of the screen. People have been using touch screens for more than 30 years, and this technology now is being used in more places, such as in smart phones, **point-of-sale** terminals, **automated teller machines**, **remote controls**, **GPS** receivers, home security systems, and **Tablet PCs**.

Touch screen technology has evolved since its creation in the late 1960s. The first touch screens developed allowed users to press only one area at a time with the tip of their finger, and they were much less accurate than today’s touch screens. <sup>[1]</sup> As the technology is advancing, users are able to perform additional tasks: such as dragging their finger across the screen and touching more than one area of the screen at a time. For example, the iPhone and iPod touch allow you to **zoom in** pictures or other objects on the screen by placing two fingers close together on the screen, and then slowly moving them apart. Three types of touch screens most in use today are **capacitive**, **resistive**, and **surface wave touch screens**.

A capacitive touch screen has a layer of material that stores **electrical charges** coating the surface. When a finger touches the screen, it conducts a small amount of the electrical charge, reducing the charge on the capacitive layer. Circuits located at each corner of the capacitive touch screen measure the change in electrical charge. The circuits then send this data to the touch screen controller, or software that is running on the computer. The controller then uses the data to calculate the location where the finger is touching the screen. Capacitive touch screens typically are high-quality and unaffected by items that do not conduct electrical charges. An example of the components of a capacitive touch screen is shown in Figure 1-2.

The second type of touch screen is a resistive touch screen. A metallic conductive and resistive layer held apart by spacers cover a resistive touch screen. When a user touches a