信息管理与信息系统专业英语

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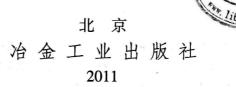
信息管理与信息系统
专业英语

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内 容 提 要

　　本书是为高等院校"信息管理与信息系统专业"的本科生及相关专业的硕士生编写的专业英语教材,旨在帮助学生积累专业英语词汇量,提高专业英语阅读理解水平。书中共设 12 个授课单元,各单元内容自成一体,可根据具体授课学时灵活选择。本书特点:选材新颖,语言规范;内容涵盖范围广泛,包括系统分析、设计、实施、信息系统的应用,决策支持系统,系统开发所需技术,信息系统与管理,信息安全,网络经济,知识管理及数据挖掘技术等领域。

　　本书对于从事计算机应用、信息技术、信息管理和情报学研究与应用的学者学习和掌握专业英语具有一定的参考价值。本书配有 PPT 课件,如有需要可与编者联系。

前　言

随着国际交流与合作的日益增多,信息管理和信息系统专业的学生不仅要具备扎实的专业知识,还要了解本专业的国际研究进展、新技术的发展以及交流的渠道。我们需要了解世界,需要培养具有国际视角、掌握信息管理和信息系统专业知识、能运用英语从事信息管理和信息系统工作的复合型人才。为进一步提高信息管理和信息系统专业高年级本科生和研究生的专业英语能力,促进人才的高层次培养,我们撰写了这本教材。本书具有如下特点:

一、语言规范。书中的课文选材源于发达英语国家近年的信息管理与信息系统和计算机应用领域的内容。

二、选材广泛、注意学科交叉。本书充分考虑到信息管理与信息系统专业属于交叉学科的特点,选材既包含了信息技术相关内容,又涵盖了计算机在经济管理相关领域的应用。

三、各单元内容自成一体、相对独立。教师可根据授课目的、教学时数和学生兴趣选择相应的单元授课。

四、各单元重点突出、扩充灵活。每单元由课文、生词和词组、注释、课堂讨论、补充阅读和自学扩充几部分组成,教师可根据授课学生的英语水平灵活取舍。

五、方便学生扩充科技英语信息量。本书不仅有补充阅读文章,还增加了自学扩充内容。学生可在短时间内迅速扩充专业英语信息量。

六、方便教师备课与自学。本书配有PPT课件,读者如有需要,可与编者联系(电子邮箱:songyuchen@ imust. cn)。

在编写过程中,参阅、吸收和借鉴了国内外专家学者有关的文献,在此对文献作者深表感谢。

因编者水平有限,书中难免存在不足和遗漏,敬请读者批评指正。

编　者
2011年1月

Contents

Unit ▽ 1

Management Information Systems

Outline

※ What Is MIS?
※ Why Is Information Technology Important?
※ What Do Managers Do?

Text

Introduction to Management Information Systems

What Is MIS?

The first step in learning how to apply information technology to solve problems is to get a broader picture of what is meant by the term management information systems. You probably have some experience with using computers and various software packages. Yet, computers are only one component of a management information system. A management information system (MIS), or computer information system (CIS), consists of five related components: hardware, software, people, procedures, and collections of data. The term information technology (IT) represents the various types of hardware and software used in an information system, including computers and networking equipment. The goal of MIS is to enable managers to make better decisions by providing quality information.

The physical equipment used in computing is called hardware. The set of instructions that controls the hardware is known as software. In the early days of computers, the people directly involved in MIS tended to be programmers, design analysts, and a few external users.

Today, almost everyone in the firm is involved with the information system. Procedures are instructions that help people use the systems. They include items such as user manuals, documentation, and procedures to ensure that backups are made regularly. Data-bases are collections of related data that can be retrieved easily and processed by the computers. As you will see in the cases throughout the book, all of these components are vital to creating an effective information system.

So what is information? One way to answer that question is to examine the use of information technology on three levels: (1) data management, (2) information systems, and (3) knowledge bases. Data consists of factual elements (or opinions or comments) that describe some object or event. Data can be thought of as raw numbers or text. Data management systems focus on data collection and providing basic reports. Information represents data that has been processed, organized, and integrated to provide more insight. Information systems are designed to help managers analyze data and make decisions. From a decision maker's standpoint, the challenge is that you might not know ahead of time which information you need, so it is hard to determine what data you need to collect. Knowledge represents a higher level of understanding, including rules, patterns, and decisions. Knowledge-based systems are built to automatically analyze data, identify patterns, and recommend decisions. Humans are also capable of wisdom, where they put knowledge, experience, and analytical skills to work to create new knowledge and adapt to changing situations. To date no computer system has attained the properties of wisdom.

To create an effective information system, you need to do more than simply purchase the various components. Quality is an important issue in business today, particularly as it relates to information systems. The quality of an information system is measured by its ability to provide exactly the information needed by managers in a timely manner. The information must be accurate and up-to-date. Users should be able to receive the information in a variety of formats: tables of data, graphs, summary statistics, or even pictures or sound. Users have different perspectives and different requirements, and a good information system must have the flexibility to present information in diverse forms for each user.

Why Is Information Technology Important?

Personal Productivity

An enormous amount of data is available to managers-generated internally and externally. It is impossible to deal with this volume of data without information technology. The era of "pure" managers who simply direct other people is gone. Managers today must be capable of performing the tasks within their area of expertise. For example, accounting managers still practice accounting, lawyers handle cases, and financial managers still track investments. In other words, managers do two jobs: perform basic day-to-day functions, as well as plan, organize, and communicate.

Firms are increasingly required to improve productivity, which means that each year managers must increase production without increasing the number of workers. Information technology is crit-

ical to this improvement process, enabling employees to perform more tasks, getting work done faster at lower cost.

Teamwork and Communication

It is tempting to believe that once you learn how to use a word processor, a spreadsheet program, and a Web browser, you have all the computer knowledge needed to solve business problems. [1] In fact, these are powerful tools that will help you solve business problems that arise at a personal level. But businesses have many more levels of problems, such as data collection, departmental teamwork, information shared throughout the corporation, and uses of IT that help the business gain a competitive advantage.

You also need to understand database, groupware, and enterprise tools that give you access to data across the company and help you share it with team members around the world. Most companies are in a continual race to get products and services to customers faster than the competition. Moving communication away from paper to electronic messages and online meetings can significantly reduce the time required to coordinate a group and make decisions—speeding up the overall process.

Business Operations and Strategy

Information technology is increasingly critical to the daily operations of a business. Obviously, on-line businesses cannot live without technology, but neither can the local grocery stores, bank, or many other businesses. Computers process sales, handle payments, and place new orders. They also analyze the sales data and help set prices and predict trends. Information technology is also used to create new products and services or to provide unique features to existing products. These new features can give your company a strategic advantage and help the company grow.

What Do Managers Do?

Traditional Management and Observations

To create useful information systems, it is helpful to examine the various roles of management. Traditional concepts of management focus on organizing, planning, and controlling. *However, when observed at their jobs, managers appear to spend most of their time in meetings, talking on the phone, reading or preparing reports, discussing projects with their colleagues, explaining procedures, and participating in other activities that are difficult to fit into the traditional framework.* [2]

Henry Mintzberg, a psychologist who studies management, classifies managerial tasks into three categories: (1) interpersonal, (2) informational, and (3) decisional. Interpersonal roles refer to teaching and leading employees. Informational tasks are based on the transfer of information throughout the organization, such as relaying information to subordinates or summarizing information for executives. Decisions involve evaluating alternatives and choosing directions that

benefit the firm.

Other researchers have studied managers and developed alternative classifications. Fred Luthans uses three classifications of management activities. He indicates that approximately 50 percent of a manager's time is spent on traditional management activities (planning, organizing, etc.), 30 percent in formal communications, and 20 percent in informal networking. Formal communications include attending meetings and creating reports and memos. Informal networking consists of contacts with colleagues and workers that tend to be social in nature but often involve discussions regarding business and jobs.

Making Decisions

In many ways managers expend a lot of their effort in making decisions or contributing information so others can make decisions. When you look at courses offered for future managers you will find a focus on administration, human behavior, quantitative modeling and problem solving, decision theory, and elements of business ethics and globalization.

Typically, these courses are designed to help managers solve problems and make decisions. However, if you ask managers how much time they spend making decisions, they are likely to say that they seldom make decisions. That seems like a contradiction. If managers and executives do not make decisions, who does?

In many organizations, day-to-day decisions are embodied in the methodology, rules, or philosophy of the company. Managers are encouraged to collect data and follow the decisions that have resulted from experience. In this situation and in many others, the managers are directly involved in the decision process, even though they may not think they are making the final choice.

The broader decision process involves collecting data, identifying problems, and making choices. One more step is often involved: persuading others to accept a decision and implement a solution. With this broader definition, many of the tasks performed by managers are actually steps in the decision process. Meetings, phone calls, and discussions with colleagues are used to collect data, identify problems, and persuade others to choose a course of action. Each of these steps may be so gradual that the participants do not think they are actually making decisions.

Because of the subtlety of the process and the complexity of the decisions, it is often difficult to determine what information will be needed. Decisions often require creativity. Because data generally need to be collected before problems arise, it is challenging to design information systems to support managers and benefit the organization. One important job of management is to examine the need for information and how it can be used to solve future problems.

Bibliography

● Gerald V. Post, David L. Aderson. Management Information Systems Solving Business Problems with Information Technology (Third Edition). McGraw-Hill Europe, 2002, pp. 4 – 8.

New Words

involve	/in'vɔlv/	vt. 包含;牵涉;使陷于;潜心于
manual	/'mænjuəl/	n. 手册,指南;说明书
documentation	/ˌdɔkjument'teiʃən/	n. 文件材料
integrate	/'intigreit/	vt. 使…完整;使…成整体
identify	/ai'dentifai/	vt. 识别;确定;使参与;把…看成一样
property	/'prɔpəti/	n. 性能;道具,内容
format	/'fɔːmæt/	n. 版式;开本;格式
perspective	/pə'spektiv/	n. 透视图;远景;观点
graph	/grɑːf;græf/	n. [数]图表;曲线图
day-to-day	/'deitə'dei/	adj. 逐日的;日常的
critical	/'kritikəl/	adj. 批评的,爱挑剔的;决定性的;危险的
spreadsheet	/'spredʃiːt/	n. 电子数据表;电子制表软件
database	/'deitəbeis/	n. 数据库,资料库
groupware	/'gruːpwɛə/	n. 组合件;[计]群组软体
access	/'ækses/	vt. 存取;接近;使用 n. 通路;进入;使用权
feature	/'fiːtʃə/	n. 容貌;特色,特征;特写或专题节目
participate	/pɑː'tisipeit/	vi. 参与,参加;分享 vt. 分享;分担
interpersonal	/ˌintə'pəːsənəl/	adj. 人际的;人与人之间的
subordinate	/sə'bɔːdinət/	n. 下属,下级;部属,属下
alternative	/ɔːl'təːnətiv/	adj. 供选择的;选择性的;交替的 n. 二中择一;供替代的选择
ethics	/'eθiks/	n. 伦理学;伦理观;道德标准
methodology	/ˌmeθə'dɔlədʒi/	n. 方法学,方法论
contradiction	/ˌkɔntrə'dikʃən/	n. 矛盾;反驳;否认

Phrases

Web browser	浏览器
spreadsheet program	电子制表程序
in nature	本质上,事实上
be designed to	目的是;被设计用于做
software packages	软件包
formal communication	正式沟通
informal network	非正式的沟通
word processor	文字处理软件;文字处理机

Abbreviations

MIS：Management Information Systems	管理信息系统
CIS：Computer Information System	信息系统
IT：Information Technology	信息技术

Notes

连词+过去分词的用法

分词作状语时,表示时间、原因、方式、结果、条件、让步和伴随情况等。现在分词与过去分词的区别主要体现在时间和语态上。现在分词表示正在进行的动作并表示主动的意义,而过去分词表示已经完成的动作并表示被动的意义。为使分词短语与主句关系更清楚,可在分词前加连词。连词有:when,while,if,though,after, before, as, 但它的逻辑主语应与句子的主语一致。

1. *It is tempting to believe that once you learn how to use a word processor, a spreadsheet program, and a Web browser, you have all the computer knowledge needed to solve business problems.*

句意:一旦你学习如何使用文字处理软件、电子数据表和网页浏览器,你会认为自己已经掌握了所有解决业务问题所需的计算机知识。
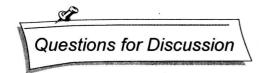
句式分析:本句中第一个句子 that 引导的 believe 宾语从句。这里 It is tempting to be-
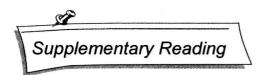
lieve…可以理解成有些事情会使你相信…。

2. *However, when observed at their jobs, managers appear to spend most of their time in meetings, talking on the phone, reading or preparing reports, discussing projects with their colleagues, explaining procedures, and participating in other activities that are difficult to fit into the traditional framework.*

句意：然而,如果观察一下管理者的工作,他们花费了大部分时间在这些事情上:开会、打电话、阅读准备报告、与同事们讨论项目、解释流程和参与其他很难符合传统框架的活动。

句式分析：这句话中的 when observed 相当于由 when 引导的状语从句:when they are observed…,其中 they 指代 managers,因为主从句的主语是同一主语,所以从句中可省略主语并用分词形式表达状语从句。

Questions for Discussion

1. What is MIS?
2. What is information?
3. Why is information technology important?
4. How to speed up the overall management process? Give an answer briefly.
5. Why does it seem contradiction that when managers are asked how much time they spend making decisions, they are likely to say that they seldom make decisions?

Supplementary Reading

Text	Note
Business and Technology Trends Even without the Internet, management and companies are changing. The most important change is the move away from the traditional **hierarchical**[1] structure to a team-based approach. Most of today's large companies developed years ago when communications were limited and there were no computers. Most adopted a military-inspired hierarchical command structure shown. The top-level managers set policy and directed the vice presidents to carry out the mission of the company. Sales staff dealt directly with customers, collected data, and passed it to middle managers. The middle managers organized and summarized the data and passed it up the chain. Little data was shared among the middle and lower levels.	[1] *adj.* 分层的;等级体系的

Text	Note
In contrast, because it is easy to share data, information technology offers the ability to **alter**[2] the way companies are organized and managed. This method focuses on teamwork and a shared knowledge of all relevant data. Some teams, like sales and accounting, will have ongoing tasks. Other task forces will be formed to solve new problems—often from managers across the company. Managers can expect to participate in many teams, essentially at the same time. Data can be obtained and shared through the information system, meetings can be held online, documents and comments can be **circulated**[3] electronically.	[2]*vt.* 改变,更改
This structure enables companies to be run with a smaller number of managers. Each manager is more productive because of the tools and the ability to perform many jobs. Another strength of this approach is that it is easy to use consultants and temporary workers for short-term projects. In today's legal climate, it is exceedingly difficult to fire workers, so firms often use **temporary**[4] workers for individual projects: **permanent**[5] workers, supplemented with specialized temporary talent; can organize a team. The team disbands when the project is finished.	[3]*v.* 流通,循环, 传播
As described, seven fundamental trends have been driving the economy and changing businesses: (1) specialization, (2) management by methodology, (3) mergers, (4) decentralization and small business, (5) reliance on temporary workers, (6) internationalization, and (7) the increasing importance of service-oriented businesses. Some of these trends will be discussed throughout the text to illustrate how they affect the use of information systems and how managers can use information systems to take advantage of these trends. **Tightening**[6] job markets also means that managers must continually work on self-improvement. To survive, you must provide value to the organization.	[4]*adj.* 暂时的,临时的 [5]*adj.* 永久的,永恒的;不变的
Specialization	[6]*vt.* 变紧;使变紧
The basic advantages of **specialization**[7] and division of labor in manufacturing were discussed by Adam Smith more than 200 years ago. The concepts are now being applied to managers. As functional areas (such as marketing or finance) become more complex, they also become more specialized. Area managers are expected to understand and use increasingly **sophisticated**[8] models and tools to analyze events and make decisions. As a result the demand for managers with specific technical skills is increasing, while the demand for general business managers is declining. This trend is reflected in MIS by the large number of specialized tools being created and the increased communication demands for sharing information among the specialists.	[7]*n.* 专门化;特殊化;[生]特化作用 [8]*adj.* 久经世故的;富有经验的;精致的;复杂的

Text	Note
Management by Methodology and Franchises An important result of specialization is the reduction of management tasks to smaller problems. Using specialization coupled with technology, firms have reduced many management problems to a set of rules or standard operating procedures. Day-to-day problems can be addressed with a standard methodology. For example, the manager's guidebook at Wal-Mart or at Mrs. Fields Cookies explains how to solve or prevent many common problems. These rules were created by analyzing the business setting, building models of the business, and then creating rules by anticipating decisions and problems. This approach gives less flexibility to the lower-level managers but encourages a standardized product, consistent quality, and **adherence**[9] to the corporate philosophy. 　　Management by methodology also allows firms to reduce their number of middle managers. By anticipating common problems and decisions, there is no need to call on trained managers to solve the daily problems. **Franchises**[10] like McDonald's or Mrs. Fields Cookies carry this technique one level further by making the franchisee responsible for the financial performance of individual units. The common management tasks, however, are defined by the central corporation. **Mergers** Up to the late 1800s and early 1900s, most businesses were small, having markets limited to small geographic regions. A brief history of industrial organization **reveals**[11] four waves of mergers in the United States: (1) the horizontal mergers of the late 1800s **epitomized**[12] by the oil and banking industries; (2) the vertical integration of the early half of the 20th century, illustrated by the oil, steel, and automobile companies; (3) **conglomerate**[13] mergers of the 1950s and 1960s, in which firms like IT&T (an international telecommunications giant) acquired subsidiaries in many different industries (including a bakery!); and (4) giant horizontal mergers of the late 1990s. All of these mergers arose to take advantage of economic power, but technology made them possible. Without communication (telegraph and telephones earlier, computer networks later), firms could not grow beyond a certain size because managers could not monitor and control lower-level workers.	[9] *n.* 坚持;依附; 　　忠诚 [10] *n.* 特权,公 　　民权 [11] *v.* 显示,透露 [12] *vt.* 摘要;概括; 　　成为…的缩影 [13] *vi.* 凝聚成团 　　*n.* 砾岩;聚合 　　物;企业集团

Text	Note
The mergers in the mid-to late 1990s were impressive in terms of the size of the firms and the sectors involved. The banking industry was one of the first to begin **consolidation**[14]. Relaxation of federal restrictions quickly led to large regional and national banks. The telecommunications industry also experienced several changes, such as the ABC-Disney and AOL-Time/Warner merger between telecommunications and entertainment industries.	[14] *n.* 巩固;合并;团结

Telephone, Internet, and cable companies also were fertile ground for mergers, such as MCI and WorldCom or AT&T and TCI. The horizontal mergers in the petroleum, food production, automobile, and grocery industries represented major consolidation of operations as well. Some of these trends were fueled by the high stock market valuations, which provided capital to the successful firms and punished the weaker ones.

One of the important keys to these mergers was the improved capability of information and communication technology. Without the IT structure, it would be exceedingly difficult to manage these combined firms. Most of the combinations also resulted in a loss of middle management jobs. The remaining workers relied on technology to improve their productivity. The newly centralized firms also relied on communication technology to provide customers service across the country.

Decentralization and Small Business

Today, technology makes it possible split firms into smaller units that make decisions at lower levels (**decentralization**[15]). In addition to faster communication, technology makes available low-cost hardware and software to each division. It is no possible to operate a company as a collection of small teams and maintain complete management statistics without the need for hundreds of bookkeepers and accountants. In the past, with limited information technology, small divisions were expensive to maintain because of the cost of collection and processing the basis accounting and operation data.

[15] *n.* 分散;非集权化

Within a firm, operations can be decentralized into teams of works. In this situation, departments operate relatively independently, "selling" services to other departments by competing with other teams. They often perform work for outside firms as well-essentially operating as an independent business unit within the corporation.