

王忠敏 郑卫华 主编

国际标准化活动 理解与实践

——英语教程

Understanding and Practicing
International Standardization
(English Coursebook)

 中国标准出版社



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Preface

Standards facilitate the transfer of technology and good practices. They are used in contractual relations between economic actors and to gain market access for products and services. They support quality, safety and environmental protection, as well as the associated conformity assessment procedures.

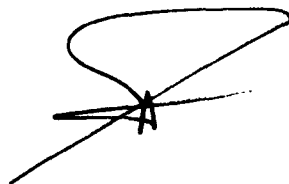
The globalization not only of trade, but of many other issues such as the climate change, the increase in natural disasters, the need to ensure the dissemination and security of information technologies or to fight the cross-border spread of pandemics, create greater interdependence and imply more solidarity between the citizens of the “global village”. This results in an increasing need and production of consensus based international standards. The World Trade Organization clearly commits the signatories of its Agreement on Technical Barriers to Trade to use and reference international standards of the type produced by ISO in order to avoid creating unnecessary obstacles to trade through technical regulations.

Participating actively in international standardization, as well as following and implementing its developments, have thus become key factors for competitiveness and social progress. China has well understood this imperative and is taking steps to increase significantly its involvement in international standardization and particularly in ISO. This is welcomed from the rest of the world community and a sign that China wishes to play a role on the standardization scene of the same magnitude as its fast growing economy.

This publication will therefore come at a timely moment for the thousands of Chinese experts who will get increasingly involved in interna-

tional standardization. It contains updated information on the world standardization scene and precious facts and data concerning the “ISO System”. I am confident that it will be widely used and will assist in enabling Chinese stakeholders, and the Chinese economy at large, in making the best of being a member of ISO. The hosting in Beijing of the 2008 Olympic Games will be a unique opportunity to illustrate that China has reached the top of the “world class”, i. e. by implementing international standards to support the high level of quality, security and respect for the environment that will certainly be expected and appreciated by the world community.

By

A handwritten signature in black ink, consisting of a large, stylized loop at the top and a horizontal line crossing through it, with a vertical line extending downwards from the center.

ISO Secretary General
2006. 07. 31

序

标准能够促进技术和良好行为规范的推广和应用,亦用于建立经济主体之间的契约关系以及产品和服务的市场准入,是质量、安全和环境保护以及相关合格评定的基础。

目前,不仅出现了贸易全球化,而且在其他事务上也出现了全球化的趋势,如气候变化、自然疾病的增加、信息技术和信息安全的需求以及应对跨国界的流行病,这些都加强了“地球村”的民众之间的相互依赖和团结,结果导致了对基于协调一致的国际标准的需求更加强烈。世界贸易组织(WTO)在其签定的贸易技术壁垒协定(TBT)中明确规定可以使用和参照 ISO 制定的国际标准以避免由技术法规而产生的不必要的贸易障碍。

积极参与国际标准化活动,并遵循和实施国际标准,已经成为增强竞争力和社会进步的关键因素。中国意识到了这种紧迫感,加快了参与国际标准化活动的步伐,在 ISO 中尤为突出,受到了国际社会的欢迎,同时,也表明中国随着其经济的高速发展,也希望在标准化领域发挥作用。

因此,对于众多日益参与国际标准化活动的中国专家来说,本书的出版非常及时。该书包括了国际标准化领域的最新信息和“ISO 体系”中的详实数据。我相信该书将被广泛使用,并有助于作为 ISO 成员国的中国做到最好。北京举办 2008 年奥林匹克运动会将是一个独特的机遇,证明中国达到了世界级水平,即通过实施国际标准实现高水平的质量、安全和环境保护,从而受到国际社会的赞赏。

阿兰·伯登
国际标准化组织秘书长
2006 年 7 月 31 日

Foreword

It is universally recognized that standards and standardization play an indisputable role in our economic and social activities. The recognition of a certain standard by the general public and the wide scope standardization covers are indication of this role. The globalization of economy and information is calling for higher standards for general application. This is reflected in the augmentation of the role of the International Standards Organization and the wide application of ISO standards. In the process of globalization, the Chinese economy has been fully integrated into the world economy, which calls for Chinese standardization professionals to actively participate in international standardization activities, to upgrade Chinese standards to internationally recognized standards, to raise our national competitiveness and to promote trade.

Unlike general administration, standardization work is of a highly technical nature, with its own rules and patterns. On the other hand, as a consequence of the decades-long planned economy, there still exist considerable differences from established international practices in the process of formulating Chinese standards as well as in China's standardization activities. This has highlighted the need for us to further acquire relevant knowledge in this field and to enhance our communication and cooperation with national standardization communities and the ISO. To achieve this end, the first obstacle we need to overcome is the language.

As an international language, English is one of the ISO's working languages. For China to fully integrate into the world standardization systems, to participate in ISO's work, and to upgrade Chinese standards to internationally recognized standards, it has become top priority for Chinese standards and standardization professionals to improve their

English competence. For this purpose and in line with the practical needs for active participation in international standardization activities, we, with the support from and under the guidance of the ISO, undertook the writing of **Understanding and Practicing International Standardization**, an English course book for standards and standardization professionals and those interested in this field to both improve their language competence and acquire relevant professional knowledge.

This course book contains 17 units, featuring the various aspects of international standards and standardization, including:

1. Basic concepts and relevant knowledge of international standardization
2. ISO
3. IEC
4. ITU
5. World standards cooperation and World Standards Day
6. Committee on Conformity Assessment
7. Committee on Consumer Policy
8. Committee on Developing Country Matters
9. Work for Developing Countries
10. Committee on Reference Materials
11. ISO Technical Committees
12. How are ISO standards developed
13. Attending ISO TC/SC meetings
14. Resources of secretariats and qualifications of secretaries
15. Secretariats of technical committees and subcommittees
16. Writing proposal for new work
17. ISO strategic planning 2005-2010.

Each unit contains four sections: Pre-reading Activities, Listening, Text, and Exercises and Activities. This course book highlights the following features:

1. The warm-up questions in the Pre-reading Activities section were designed for oral practice and build-up to the text.

2. The content in the Listening section is relevant to the text, designed for both listening comprehension and as lead-in to the text. The

activities designed for Listening feature variety, including true-false statements, gap-filling, multiple choice and questions.

3. The text in each unit contains up-to-date information on international standardization.

4. A variety of activities were designed around the text, including true-false statements, multiple choice, matching, English-to-Chinese translation, discussion questions and writing tasks.

5. The materials and activities for listening, speaking, reading, writing and translation all center round the same topic to form a complete unit, aiming to cultivate learners' all-round skills and abilities to facilitate their participation in international standardization activities.

This course book was designed for non-native speakers of English with an elementary to intermediate level of the English language, including:

- Members and technical experts of standardization technical committees;
- Staff of secretariats of standardization technical committees;
- Personnel from businesses and other circles who have an interest in standardization;
- Undergraduate and postgraduate students in relevant fields of study.

This course book was co-edited by Zhongyu Wang, Senior Engineer, former member of ISO Board of Directors and former Deputy Director of the Standardization Administration of the People's Republic of China; and Weihua Zheng, Research Fellow and President of China National Institute of Standardization. The course book was written by Jianyu Xing, of University of International Business and Economics (Units 10-17), and Yanru Hu, of the Institute of Tourism, Beijing Union University (Units 1-9). Education expert Julia M. Pippet from London School of English proofread this course book. Our special thanks goes to Alan Bryden, Secretary General of ISO Central Secretariat, who kindly wrote the Preface to this course book. Our thanks also goes to Yongping Jiang, Wu Tian, Ying Chen, Li Huang, Yuehui Sun, Xiaodan Liu, Chunmei Fan and Wanjin Tang for their valuable contribution in the process of writing and publication of this course book.

前 言

标准和标准化在人类经济和社会生活中的重要作用已经成为举世公认的不争事实。衡量标准和标准化作用大小的唯一尺度,就是某一标准为人们所认知的广度和标准化活动所覆盖的程度。经济和信息全球化的迅速发展,导致了标准普遍适用的要求不断升高,这一特点的外在表现就是国际标准化组织的作用的不断扩大和国际标准的普遍推行。随着中国与世界各国的贸易往来越来越频繁,中国的经济已经和正在成为世界经济的重要组成部分,中国标准化工作者广泛参与国际标准化活动,力争使更多中国的标准成为国际标准,从而提升国家竞争力,促进贸易发展的要求就客观地提到大家面前了。

标准化工作是一项专业性很强的技术业务工作,它不同于一般的行政管理,而有着自身的工作规则和规律。另一方面,由于中国过去长时间实行的计划经济的影响,直至现在在标准的制定和标准化工作的过程中也还有许多与国际惯例不同或者说不接轨的地方,这就更需要我们加强和加深这方面的学习了解,加强和加深同各国标准化界以及国际标准化组织的沟通和合作。自然,要达到这一目标的直接障碍首要的就是语言。

英语是国际语言,也是国际标准化组织的工作语言。对于中国标准化工作者来说,要实现与国际接轨,广泛参与国际标准化工作以至于努力使中国的标准上升为国际标准,学习和掌握英语,提高自身的英语能力就成了当务之急。为此,我们根据参与国际标准化活动的实际需要,在国际标准化组织的支持和指导下组织编写了《国际标准化活动理解与实践——英语教程》一书,作为供标准化工作者或对此感兴趣的有关人士学习和训练的一本教程。

本教程内容丰富,覆盖了国际标准化活动的各个方面,共分 17 个单元,其内容分别是:国际标准化基本概念及相关知识、国际标准化组织、国际电工委员会、国际电信联盟、三大国际标准组织合作新机制——世界标准合作与世界标准日、ISO 合格评定委员会、ISO 消费者政策委员会、ISO 发展中国家事务委员会、ISO 为发展中国家所展开的工作、ISO 标准样品委员会、ISO 技术委员会、ISO 标准制定程序、如何参加 ISO TC/SC 会议、秘书处资源和秘书资格、ISO 技术委员会秘书处、如何编写新工作提案和 ISO 发展战略。每单元的内容由 4 部分组成:1. 课前活动;2. 听力理解;3. 课文阅读;4. 课后练习与活动。

本教程有以下几个特点:

1. 课前活动中设计了一些与课文内容相关的“热身”问题,既可以引导学员开口,又可以为学习课文做铺垫。

2. 听力部分的内容与课文相关,这样既可以训练学员的听力,又为学习课文起到导入作用。听力部分练习设计多样,有是非判断题、填空题、选择题和问答题。

3. 课文内容新颖,每篇课文都是选取国际标准化相关信息的最新内容。课文后还配有词汇表和课文注释,以扩大学员在国际标准化方面的词汇量和相关背景知识。

4. 每篇课文之后围绕课文内容配有多种练习题,具体包括:是非判断、多项选择、连线搭配、英译汉、口语讨论、短文写作。

5. 每单元听、说、读、写、译的内容和练习设计各有侧重,但又围绕同一主题展开,相互间紧密配合,形成一个有机整体,以培养学员较强的阅读能力和一定的听、说、写、译能力,使他们能以英文作为交流工具参与国际标准化方面的工作和活动。

本教程适用于非英语国家具有初、中级英语水平的下列人员:

- 各全国专业标准化技术委员会委员和技术专家;
- 各全国专业标准化技术委员会秘书处的工作人员;
- 企业和社会各界对国际标准化工作感兴趣的其他人员;
- 相关专业的大学生和研究生。

本教程由原国际标准化组织 ISO 理事会理事、原国家标准委副主任、教授级高级工程师王忠敏同志和中国标准化研究院院长、研究员郑卫华同志担任主编。由对外经济贸易大学邢建玉、北京联合大学旅游学院胡嫣茹、中国标准化研究院高级工程师田武任副主编,胡嫣茹负责编写前九个单元,邢建玉负责编写后八个单元。我们还荣幸地邀请到伦敦英语学院教育专家 Julia M Pippet 担任了本教程的主审。特别值得一提的是国际标准化组织 ISO 中央秘书处秘书长 Alan Bryden 先生还特意为本教程撰写了热情洋溢的序言。姜永平、田武、陈莹、黄立、孙月辉、刘晓丹、范春梅、汤万金为本教程的编辑和出版做了大量有益的工作,在此一并致谢。

由于经验不足,水平有限,不当之处还望读者提出宝贵意见,以便修改、完善。

编 者

2006 年 9 月

Contents

Unit 1	Standards and Standardization	1
Unit 2	ISO	12
Unit 3	IEC	23
Unit 4	ITU	35
Unit 5	World Standards Cooperation and World Standards Day	48
Unit 6	Committee on Conformity Assessment	59
Unit 7	Committee on Consumer Policy	72
Unit 8	Committee on Developing Country Matters	84
Unit 9	ISO's Work for Developing Countries	94
Unit 10	Committee on Reference Materials	104
Unit 11	ISO Technical Committees	120
Unit 12	How Are ISO Standards Developed	128
Unit 13	Attending ISO TC/SC Meetings	137
Unit 14	Resources of Secretariats and Qualifications of Secretaries ...	145
Unit 15	Secretariats of Technical Committees and Subcommittees	152
Unit 16	Writing Proposal for New Work	161
Unit 17	ISO Strategic Plan 2005-2010	173
	Suggested Answer to Exercises and Activities	186

Unit 1

Standards and Standardization

Learning Objectives

By the end of this unit you will learn:

- Definition of standard
- Content, roles and types of standards
- International and regional standards bodies
- Standardization
- Standardization process

Section 1 Pre-reading Activities

Warm-up Questions:

1. What is meant by a standard?
2. How are standards identified?
3. How do you interpret the role standards play in society?
4. How do you understand the standardization process?

Section 2 Listening

You are going to hear a passage on *Content of a standard*. Listen carefully and complete the following tasks.

Part I Decide whether the following statements are true or false according to the passage. Write T for “true” and F for “false”.

1. _____ Standards deals with all technical, economic and social aspects of human activity except for some basic disciplines such as language or mathematics.
2. _____ A standard is a result of joint work and is validated by an agreement among all relevant interested parties.

3. _____ Standards are reviewed occasionally to ensure that they evolve together with technological and social progress.
4. _____ Individuals are not entitled to consult or purchase standards; only national or international standardization bodies have a direct access to them.
5. _____ Standards are compulsory and their implementation is also an obligation.

Part II Complete the following statements with the information you hear on the tape.

1. Standards are _____ so that barriers between different areas of activity and different trades are overcome.
2. Standards are a _____ process because they are based on actual experience and lead to material results in practice.
3. Standards have a _____ in commercial contracts and in court in the event of a dispute.
4. Standards have _____ because they are documents recognized as valid—nationally, regionally or internationally, as appropriate.

Section 3 Text

Standards and Standardization

Definition of standard

When the large majority of products or services in a particular business or industry sector conform to International Standards, a state of industry-wide standardization can be said to exist. This is achieved through consensus agreements between national delegations representing all the economic stakeholders concerned—suppliers, users, government regulators and other interest groups, such as consumers. They agree on specifications and criteria to be applied consistently in the classification of materials, in the manufacture and supply of products, in testing and analysis, in terminology and in the provision of services. In this way, International Standards provide a reference framework, or a common technological language, between suppliers and their customers—which facili-

tates trade and the transfer of technology.

ISO/IEC Guide 2:2004 defines a standard as a *document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.*

Role of standards

A standard represents a level of know-how and technology which renders the presence of industry to its preparation indispensable. A standard is never neutral. It is a reference document used in particular in the context of public contracts or in that of international trade and on which the majority of commercial contracts rely.

It is used by industrialists as the indisputable reference, simplifying and clarifying the contractual relations between economic partners. It is a document that is being used more and more by jurisprudence. For the economic players, the standard is;

a factor for rationalization of production; the standard makes it possible to master the technical characteristics, to satisfy the customer, to validate the manufacturing methods, to increase productivity and gives operators and installation technicians a feeling of security;

a factor for clarification of transactions; faced with overabundant product or service offers which may have extremely different practical values, the existence of systems of reference enables one to better assess the offers and to reduce uncertainties, to aid in the definition of the needs, to optimize supplier relations, to do without additional testing;

a factor for innovating and developing products; to participate in standardization work enables one to anticipate and therefore to make one's products progress simultaneously. Standards play a favorable role for innovation thanks to transferral of knowledge;

a factor for transferral of new technologies; standardization facilitates and accelerates the transferral of technologies in fields which are essential for both companies and individuals (new materials, information systems, biotechnology, electronics, computer-integrated manufacturing (CIM), etc.);

a factor for strategic choice for companies; to participate in standardization signifies introducing solutions adapted to the competence of one's company and equipping oneself to compete within competitive economic environments. It signifies acting on standardization, not enduring it.

Types of standards

There are four major types of standards;

- fundamental standards which concern terminology, metrology, conventions, signs and symbols, *etc.* ;
- test methods and analysis standards which measure characteristics;
- define the characteristics of a product (product standard) or of a specification standards which service (service activities standard) and the performance thresholds to be reached (fitness for use, interface and interchangeability, health, safety, environmental protection, standard contracts, documentation accompanying products or services, *etc.*);
- organization standards which deal with the description of the functions of the company and with their relationships, as well as with the modeling of the activities (quality management and assurance, maintenance, value analysis, logistics, quality management, project or systems management, production management, *etc.*).

Standards are generally designated to a few letters (prefix) and a number. The letters (*e. g.* , ISO, EN, BS,) indicate the standards body that has approved them; the number identifies the specific standard. The standards reference number quite frequently gives an indication of adoption where standards are equivalent. For example, the reference "UNI EN ISO 9001" indicates an Italian national standard (UNI) which is an adoption of a European standard (EN), which itself is an adoption of International Standard ISO 9001. Two of the most widely known series of international standards are the ISO 9000 series for quality management systems, and the ISO 14000 series for environmental management systems.

Standardization

Standardization is today recognized as being an essential discipline for all players within the economy, who must strive to master its motivating forces and implications. 20 years ago, it was the reserved field of a few specialists. Today, companies have integrated standardization as a major technical and commercial element. They are aware that they must play an active role in this field, or be prepared to accept standardization which is established without them, or without consideration of their interests.

International, regional and national standardization

Standardization is drawn up at international, regional and national level. The coordination of the work at these three levels is ensured by common structures and cooperation agreements.