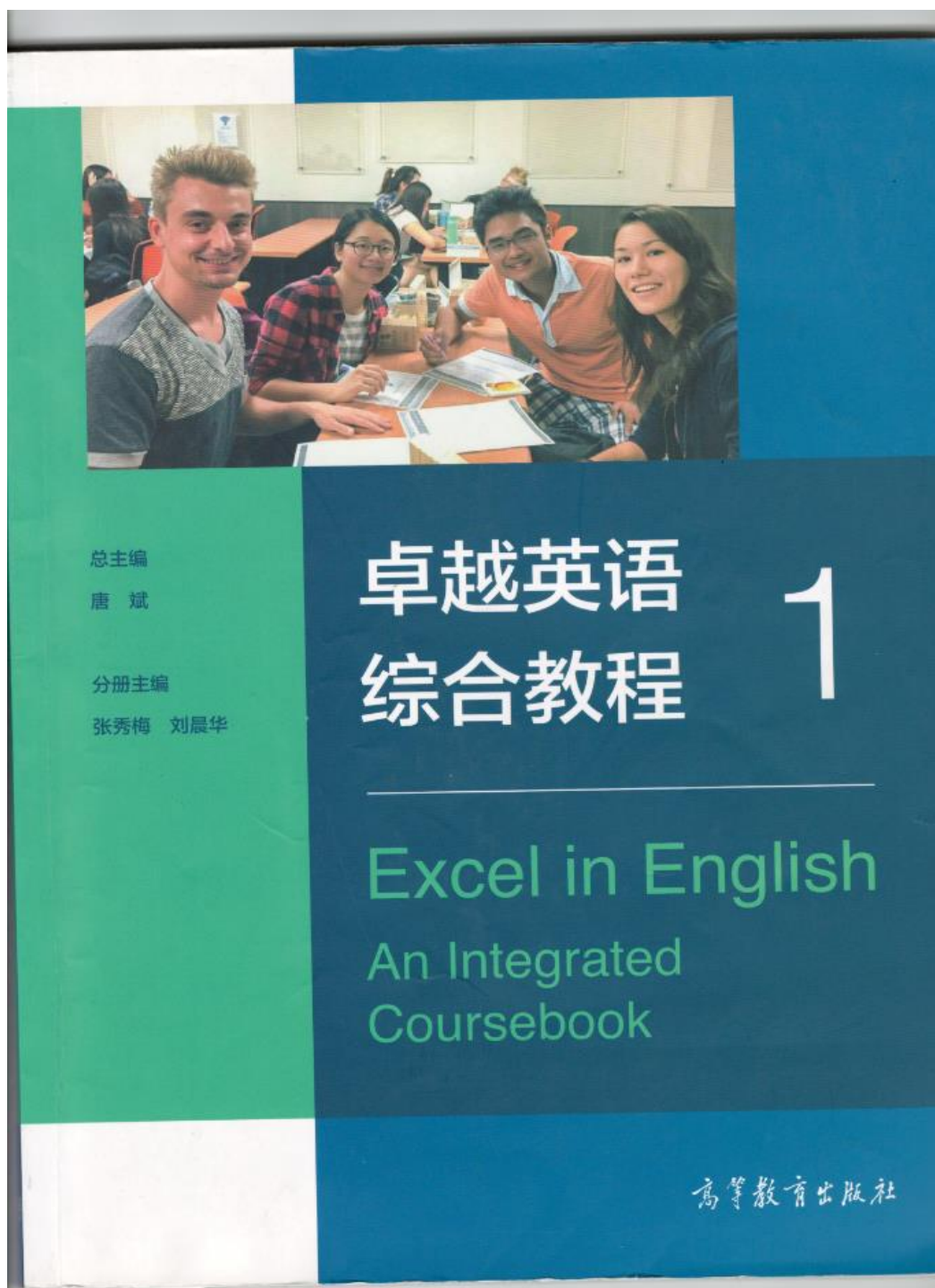


4. 有关教材



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# 卓越英语 综合教程

# 1

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An Integrated  
Coursebook

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# 前言

随着中国经济的发展和对外开放的加深,高校的英语教学日益凸显其重要性。但是,目前各校使用的英语教材同质化现象严重,大都是以文学、文化为主的传统通识课程为教学内容,缺乏结合各校自身学科优势和行业特色的英语教材,不能适应高校发展的社会文化环境及专业发展特点,无法满足国家、社会、学校和个人发展的需要。近年来,国家“一带一路”倡议极大地提速我国对外经贸、文化等合作交流的广度与深度,随着中国在科技研发、经济贸易、工程建设等方面国际合作的日益深化,在高铁技术出口、国际工程谈判与经贸文化交流等方面需要大量国际型交通运输工程特色的专门技术人才。作为未来的中国建设者,要树立文化引领经济的高度自觉,只有深入了解中外文化,才能更好地实现跨文化交际,促进区域共同发展,实现合作共赢。

教育部2017年新颁布的《大学英语教学指南》明确规定“大学英语的教学目标是培养学生的英语应用能力,增强跨文化交际意识和交际能力,同时发展自主学习能力,提高综合文化素养,使他们在生活、社会交往和未来工作中能够有效地使用英语,满足国家、社会、学校和个人发展的需要。”其明确指出“大学英语教学的主要内容可分为通用英语、专门用途英语和跨文化交际三个部分。通用英语课程是大学英语课程的基本组成部分。通用英语课程的目的是培养学生英语听、说、读、写、译的语言技能,同时教授英语词汇、语法、篇章及语用等知识,增加学生的社会、文化、科学等基本知识,拓宽国际视野,提升综合文化素养。”外国语言类教学质量标准也提出“各高校外语类专业应根据本标准制定适应社会发展需要、体现本校定位和办学特色的培养方案。”为此,我校正在积极探索外语教学创新与发展之路,探索如何结合自身院校优势,构建具有行业特色的课程体系和教学内容,使学生不仅具有跨文化交际能力,同时还具有与行业相关的英语综合应用能力。

本套教材基于 Content and Language Integrated Learning (内容-语言融合学习教学法),即结合学校交通运输工程学科优势,将语言通识的教学与交通工程专业语言技能的培养相融合,旨在提高国际型交通工程人才的行业英语素养、实际英语综合应用能力以及综合分析解决问题的能力,更好地满足国家、行业和区域社会经济发展对国际化高素质专门技术人才的需求。本套教材既可作为理工类院校非英语专业学生的主修英语教材或拓展类教材,也可作为理工院校英语专业的特色教材,还可供广大交通与工程项目涉外人员作为自学或培训教材。

本套教材共4册,每册包含8个单元,每个单元包含三个部分:Section A为单元主课文,Section B为交通工程英语,Section C为文化拓展阅读。Section A为通识英语部分,选择学生熟悉且感兴趣的热点话题,例如:大学生活、爱好、梦想、礼貌、环保、健康饮食、道德、旅游等。该部分课文内容循序渐进,由浅入深,难度、长度基本上逐册增加。课文后设置课文理解练习、词汇练习、翻译练习、写作训练及项目任务。题型设计注重语言的篇章、词汇、句子等形式,也兼顾创造性使用已有语言,完成实际交际任务。该部分贯穿项目式教学,设计了形式多样的口语活动,其中1、2册讨论活动为对话、采访、小组活动等,3、4册讨论活动难度递增,主要是一些具有深度和思辨性的演讲和辩论等。该套教材的写作训练部分由1、2册的简明的记叙文、描写文和实用文体过渡到3、4册的有一定难度的说明文、议论文等常见文体和英文摘要、报告等学术文体写作。课文后附有词汇表便于学生学习。

Section B为交通工程英语部分,1、2册的这部分内容主要介绍铁路、航空、海运和道路等领域交通方面的基本常识、发展历史和最新发展动态,3、4册的这部分内容是较为专业的交通英语内容,例如:轨道交通、



## 前言

高铁技术、火车机车系统、铁路工务、铁路车辆、铁路电务、铁路物流、道路桥梁施工等专业知识，专业化程度依次加强，英语语言难度也由浅入深，循序渐进。练习设计了课文理解、专业术语理解及翻译练习。课文后也附有词汇表方便学生学习。

Section C 为文化拓展阅读，主要涉及人文素养、中国传统文化及“一带一路”沿线国家的风土人情，目的在于响应“一带一路”倡议，拓展学生的知识面，提高学生的综合人文素养，为将来服务于中国和其他“一带一路”国家之间的交通方面的合作做准备。第1册本部分涵盖了中国文化和东南亚文化，旨在帮助学生了解掌握中国社会文化的英语表达，培养学生传播中国文化的意识，为将来在国际交流中学以致用打下基础；第2册本部分内容涵盖西亚；第3册本部分内容涵盖南亚、中亚、蒙古和埃及一些国家；第4册本部分内容涵盖中欧、东欧和独联体。

教材最后附有总词汇表（按字母顺序排列）、视听练习文本、主课文翻译以及练习答案供学生参考，有利于学生课外自主学习，教师可以在课堂上安排更多时间进行教学活动，培养学生的英语交际能力。

本套教材具有以下特色：

1. 选材主题丰富，内容新颖，语言地道，融合了知识性、实用性、开放性与趣味性。选取国外最新的报刊、网络资料和专业期刊文章进行改编，紧跟时代步伐，注重引入新知识、新技术。通过学习教材，学生既可以提高英语综合能力又可以了解中国交通现状和发展、国内外交通行业当前的国际先进技术，又能接触到一些交通方面的专业知识，学生毕业后能更好地服务交通运输行业和地方区域经济社会发展。

2. 教材针对性强，贯穿“内容·语言融合”的全新理念。本套教材融合了通识英语语言内容与交通工程专业知识，使语言技能与行业知识有机结合，培养学生丰富细腻的人文情怀和科学客观的理性思维，提高学生在交通运输工程行业的职场英语交际能力和英语综合应用能力，符合新时代英语教学目标，更好地满足国家及行业对国际化高素质专业技术人才的需求。

3. 基于项目式和探索式教学，设计了分组活动的项目任务，大大提高了学生的参与程度和英语学习积极性。教学活动和练习的设计形式多样，突出实践技能训练，练习输入性训练与输出性训练并进，便于教师在课堂上组织和开展教学活动。

4. 倡导混合式教学模式，实现教学资源立体化，因人施教，满足学生个性化、自主化学习需求。学生通过扫描习题左侧的二维码即可获得移动学习资源，不同媒介和不同载体的学习资源方便学生随时随地进行碎片化学习，可反复聆听、观看和操练。

本书在编写过程中得到了兄弟院校及有关单位的帮助和支持，同时引用和参考了国内外文献，以及《新大学英语综合教程》志学篇、辨思篇、鼎新篇和《大学体验英语（第三版）综合教程》1、3、4册，在此一并致谢。特别感谢王海琳、余霞和宁春岩三位老师参与本书的审稿工作，也特别感谢高等教育出版社的领导和编辑们为整套教材的策划和出版所做的大量工作。由于编者水平有限，书中难免有疏漏之处，敬请批评指正。

编者

2018年7月

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## Section A Introducing People



**I**n daily life, we often encounter situations where we need to introduce ourselves either verbally or in writing. Whether we get into a new school, company, group or activity, we will demonstrate confidence and friendliness by introducing ourselves appropriately. In other situations, we may need to introduce other people to an audience. When we introduce our friends, family members or anyone else in your acquaintance to others, our introductions can be as short as a single sentence in casual conversations. Others may take a few hours, as in documentary films about certain historical figures, or a few hundred printed pages, as in the case of biographies or autobiographies. How to introduce ourselves or people in an appropriate and effective way is an art of social interaction.

## Part I Warming Up

## Activity ①



Watch a video clip of a self-introduction. Guess the purpose of the self-introduction and then write down the reasons for your choice.

Purpose: A. To compete in a competition. B. To make friends. C. To look for a job.

Clue: \_\_\_\_\_

## Activity ②

Read the following words and expressions used in the self-introduction. Then find the correct explanation for each of them.

festive intellect pageant privileged showcase UC San Diego

\_\_\_\_\_ (*v.*) to display or present

\_\_\_\_\_ (*n.*) the quality of being very intelligent or clever

\_\_\_\_\_ (*adj.*) having an advantage or opportunity that most other people do not have

\_\_\_\_\_ (*adj.*) special, colorful, or exciting, especially because of a holiday or celebration

\_\_\_\_\_ (*n.*) a competition in which young women are judged to decide which one is the most beautiful

\_\_\_\_\_ (*n.*) University of California at San Diego

## Activity ③



Watch the video clip again and complete the following table with the information you have heard.

Name	
Age	
Name of university attended	
Time of graduation	
University major and minor	
Time taken to complete university studies	
Name of contest	
Purpose of contest	
Name of award	



## Part II Reading

### My Attachment to New Orleans

Bill Clinton

I was born on my grandfather's birthday, a couple of weeks early, weighing in at a **respectable** six pounds eight ounces, on a twenty-one-inch **frame**. Mother and I came home to her parents' house on Hervey Street in Hope, where I would spend the next four years. That old house seemed **massive** and mysterious to me then and still holds deep memories today. The people of Hope raised the funds to **restore** it and fill it with old pictures, **memorabilia**, and period furniture. They call it the Clinton Birthplace. It certainly is the place I **associate** with **awakening** to life — to the smells of country food; to **buttermilk churns**, ice-cream makers, washboards, and clotheslines; to my "Dick and Jane" readers, my first toys, including a simple length of chain I prized above them all; to strange voices talking over our "party line" telephone; to my first friends, and the work my grandparents did.



After a year or so, my mother decided she needed to go back to New Orleans to Charity Hospital, where she had done part of her nursing training, to learn to be a nurse anesthetist. In the old days, doctors had **administered** their own **anesthetics**, so there was a demand for this relatively new work, which would bring more **prestige** to her and more money for us. But it must have been hard on her, leaving me. On the other hand, New Orleans was an amazing place after the war, full of young people, Dixieland music, and over-the-top **haunts** like the Club My-Oh-My, where men **in drag** danced and sang as lovely ladies. I guess it wasn't a bad place for a beautiful young widow to move beyond her loss.

I got to visit Mother twice when my grandmother took me on the train to New Orleans. For more than fifty years, from that first trip, New Orleans has always had a special **fascination** for me. I love its music, food, people, and spirit. When I was fifteen, my family took a vacation to New Orleans and the Gulf Coast, and I got to hear Al Hirt, the great **trumpeter**, in his own club. At first they wouldn't let me in because I was **underage**. As Mother and I were about to walk away, the doorman told us that Hirt was sitting in his car reading just around the corner, and that only he could let me in. I found him — in his Bentley no less — tapped on the window, and **made my case**. He got out, took Mother and me into the club, and put us at a table near the front. He and his group played a great set — it was my first live jazz experience. Al Hirt died while I was President. I wrote his wife and told her the story, expressing my **gratitude** for a big man's long-ago kindness to a boy.



When I was in high school, I played the **tenor saxophone solo** on a piece about New Orleans called Crescent City Suite. I always thought I did a better job on it because I played it with memories of my first sight of the city. When I was twenty-one, I won a Rhodes scholarship in New Orleans. I think I did well in the interview in part because I felt at home there. When I was a young law professor, Hillary and I had a couple of great trips to New Orleans for conventions, staying at a quaint little hotel in

the French Quarter, the Cornstalk. When I was governor of Arkansas, we played in the Sugar Bowl there, losing to Alabama in one of the legendary Bear Bryant's last great victories. At least he was born and grew up in Arkansas! When I ran for President, the people of New Orleans twice gave me overwhelming victory margins, assuring Louisiana's electoral votes for our side.

Now I have seen most of the world's great cities, but New Orleans will always be special — for coffee and beignets at the Morning Call on the Mississippi; for the music of Aaron and Charmaine Neville, the old guys at Preservation Hall, and the memory of Al Hirt; for jogging through the French Quarter in the early morning; for amazing meals at a **host of** terrific restaurants with John Breaux, Sheriff Harry Lee, and my other pals; and most of all, for those first memories of my mother. They are the magnets that keep pulling me down the Mississippi to New Orleans.

(752 words)

## New Words &amp; Expressions

administer /əd'mɪnɪstə/ v.	to control the operation or arrangement of something 施行
anesthetic /ˌænstetɪk/ n.	a drug that causes temporary loss of bodily sensations 麻醉剂
associate /ə'səʊʃieɪt/ v.	to connect someone or something in your mind with someone or something else 把...联想在一起
awakening /ə'weɪkənɪŋ/ n.	the start of a feeling or realization 意识
buttermilk /'bʌtə,mɪlk/ n.	the liquid that is left after taking the fat from cream to make butter 白脱牛奶
churn /tʃɜ:n/ n.	a large container for transporting milk or for making milk into butter 搅乳器
drag /dɹæg/ n.	the clothing characteristic of one sex when worn by a member of the opposite sex < 假 > 异性穿的服装
fascination /fæsɪ'neɪʃən/ n.	the power to interest or attract people very strongly 魅力
frame /freɪm/ n.	the size and shape of someone's body 骨架, 身躯
gratitude /'grætɪtʃʊd/ n.	the feeling or quality of being grateful 感激

- How would you describe your hometown?  
\_\_\_\_\_
- Have you had any experiences travelling to different places in China? If so, what did you learn from those experiences?  
\_\_\_\_\_
- What was your first experience living independently? How did you feel about it?  
\_\_\_\_\_
- What do you plan to do in the future?  
\_\_\_\_\_

② Write a passage to introduce a famous person you admire most in about 120 words. Your essay may include his or her educational background, achievements, characters and the reasons for your admiration with some supporting examples.

## Section B English for Transportation



### Father of China's Railroad

Zhan Tianyou or Jeme Tien-Yow as he called himself in English, based on the Cantonese pronunciation, was a pioneering Chinese railroad engineer. Educated in the United States, he was the chief engineer responsible for construction of the Peking-Kalgan Railway (Beijing to Zhangjiako), the first railway constructed in China without foreign assistance. For his **contributions** to railroad engineering in China, Zhan is known as the "Father of China's Railroad".

Zhan was born in Namhoi (Nanhai) county (now Guangzhou) in Guangdong province. In 1872, as a twelve-year-old, he was chosen by Qing **imperial** officials to be sent to the United States as part of the Chinese Educational Mission. Together with thirty boys of similar age, he arrived in Connecticut, United States. After studying at a primary school in New Haven, he entered the Hillhouse High School there, and in 1878, was admitted to



the Sheffield Scientific School of Yale University. His major was Civil Engineering, with an emphasis in railroad construction, and received his Ph.B. degree in 1881. He was considered lucky, because only a few months after his graduation, the Qing government decided to **recall** all students studying in the United States. Of those who were sent abroad, only he and another student were able to complete their college degrees.

The Qing government officials found the behavior of the foreign-educated students to be “un-Chinese”. They had **adopted** many Western practices such as playing baseball and wearing shirts and pants instead of traditional robes and had their **queues** cut off. Instead of **utilizing** their talents to the fullest, the government sent them all, including Zhan, to work as translators or as officers in the newly formed Imperial Navy. A few years later, in 1884, the Imperial Navy at Fuchow was destroyed during the Sino-French War.

In 1888, Zhan was finally able to realize his dream of becoming an engineer. Viceroy Li Hongzhang in Peking was constructing a railroad that would link Tientsin to the coal mines in Tangshan. A British engineer, Claude W. Kinder, was hired as the chief engineer of the railroad. Through connections with his old schoolmates working in Peking, Zhan joined Kinder as an **intern** engineer. He was soon **promoted** to engineer, and later the district engineer. The railway that he worked on was later extended to become the Peking Mukden Line. He spent 12 years on various sections of this line before his next major assignment.

In 1902, Yuan Shikai decided to build a special line for Empress Dowager Cixi so she could visit the tombs of her royal **ancestors**. Kinder was the original **candidate** for chief engineer, however the French were unhappy that an Englishman was **assigned** to the position. Eventually, Zhan got the assignment as the chief engineer of the 37 kilometres (23 miles) stub line. He managed to construct the railroad within **budget** and to a very tight schedule. The Empress was pleased and permission was given to construct more railroads in China.



In 1905, the Imperial Qing government decided to build a railroad that would link the capital of Peking to the important trade city of Kalgan to the north. This railway would be of **strategic** importance to the government. The decision was therefore made that the railway would be built without foreign assistance. Capital would come from the government, and no foreign engineers were to be hired. Zhan was once again appointed as chief engineer of the railway. In the beginning, some people were skeptical that the government would be able to construct the railroad all by itself in the **rugged** mountains north of Peking. However, Zhan showed he was an able engineer and completed the work two years ahead of schedule and under budget. He included a **zigzag** section near the Qinglongqiao (Ching-lung-chiao) railway station to overcome the **steep** gradient. When **excavating** the Badaling railway tunnel, he **accelerated** construction by **drilling** a vertical shaft into the path of the tunnel. This doubled the number of digging teams that could be employed. He was also said to be a



## Activity ①

Read the passage and decide whether the following statements are true (T) or false (F).

- ① Zhan, as the chief engineer, was responsible for construction of the Peking-Kalgan Railway without foreign assistance. ( )
- ② Zhan was the only one who received the college degree among those students sent to the United States as part of the Chinese Educational Mission. ( )
- ③ The Qing government recalled all students studying in the United States a few months before their graduation. ( )
- ④ The Qing government gave opportunities to the foreign-educated students in order to utilize their talents fully. ( )
- ⑤ Zhan joined Kinder initially as an intern engineer in the construction of a railroad that would link Tientsin to the coal mines in Tangshan. ( )
- ⑥ The Empress agreed to construct more railroads in China, for Zhan managed to construct the railroad within budget and to a very tight schedule. ( )
- ⑦ The railroad, which linked the capital of Peking to the important trade city of Kalgan to the north, was completed two years ahead of schedule and under budget. ( )
- ⑧ Zhan is called as the "Father of Chinese Railroads" because of his contributions to railroad engineering in China. ( )

## Activity ②

Match the following terms with their Chinese equivalents.

- |                               |           |
|-------------------------------|-----------|
| ① drill a vertical shaft      | A. 铁路工程师  |
| ② chief engineer              | B. 陡坡     |
| ③ excavate the railway tunnel | C. 钻垂直轴   |
| ④ railroad engineer           | D. 之字形结构  |
| ⑤ Civil Engineering           | E. 总工程师   |
| ⑥ steep gradient              | F. 挖掘铁路隧道 |
| ⑦ zigzag section              | G. 土木工程   |
| ⑧ accelerate construction     | H. 加快施工   |

- |         |         |         |         |
|---------|---------|---------|---------|
| ① _____ | ② _____ | ③ _____ | ④ _____ |
| ⑤ _____ | ⑥ _____ | ⑦ _____ | ⑧ _____ |

**Activity 3** Translate the following sentences into Chinese.

- ① Zhan Tianyou or Jeme Tien-Yow as he called himself in English, based on the Cantonese pronunciation, was a pioneering Chinese railroad engineer.

---



---

- ② He managed to construct the railroad within budget and to a very tight schedule. The Empress was pleased and permission was given to construct more railroads in China.

---



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- ③ This railway would be of strategic importance to the government. The decision was therefore made that the railway would be built without foreign assistance.

---



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- ④ Zhan showed he was an able engineer and completed the work two years ahead of schedule and under budget.

---



---

- ⑤ A notice following his death written by his American peers called him the "Father of Chinese Railroads".

---



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## Section C Culture



### China Railway Museum

China Railway Museum in Beijing is the only national professional museum in China sponsored by the Ministry of Railways. It was formerly called the Museum of Science and Technology of Ministry of Railways. The initial purpose of the museum was to carry out the work of cultural exhibition, film, and model making of railway. In September 2003, the museum was renamed as China Railway Museum. After years of development, its functions have changed from a single function of exhibitions into a combination of various exhibitions, conservation,

research, dissemination, and other museum functions. It is mainly responsible for protection of cultural heritage railway industry, railway technological knowledge dissemination, development outcomes display of railway. China Railway Museum is a specialized agency that performs the heritage collections display, education, scientific research of China's railway.

#### History

In February 1978, the Ministry of Railways of China approved the establishment of Science and Technology Museum. In the same year in August, the Ministry of Railways Science and Technology Museum was officially established under the management of the Ministry of Railways. It carried out the work of cultural exhibition, film, exhibitions, and model making of railway, but there was no formal location. It was not until June 1991 that the building of China Railway Museum was constructed. In September 2003, the Science and Technology Museum of the Ministry of Railways was renamed to China Railway Museum.

#### Three exhibition Halls of China Railway Museum

China Railway Museum is divided into three exhibition halls: Zhengyang Gate Museum, Eastern Suburb Museum, and Zhan Tianyou Memorial Museum. Office of the museum is located on the NO.1 Building, NO.2 Yard, Liandao South Street, Xuanwu District Beijing.

##### • Zhengyang Gate Museum

Zhengyang Gate Museum is a main exhibition hall of China Railway Museum. It is located in the southeast side of Tian'anmen Square. Zhengyang Gate Museum exhibits the history of the development of China's railway. The outline of the exhibition strictly follows 130-year development path of Chinese railway. The outline was divided into five phases according to the railway history. The exhibition makes use of a large number of informative historical vivid pictures to fully demonstrated China's railway development history. It provides visitors with the information of China railway's past, present and future. It also provides valuable historical and important basis for historians who are interested in railroad history research.

##### • Eastern suburbs Museum

Eastern suburbs Museum is located in NO.1 Yard, Jiuxian Bridge North Road, Chaoyang District, Beijing. Eastern suburbs Museum exhibits locomotives with the construction area of 16 500 square meter. The exhibition

hall has 8 shows lines equipped with different structures and different track bed sleeper. It can display 80-90 (vehicles) locomotive in one time.

The exhibition hall displays more than 50 refurbished locomotives, whose manufacturing time span from 1881 to 1993. Among them, there are 28 sets of steam locomotives, 8 diesel locomotive, one electric locomotives, 7 passenger train, and 9 cargo vehicles. The existing Chinese oldest locomotive — No.0 steam locomotive, as well as "Mao Zedong" and



"Zhu De" locomotives that were named after the Chinese meritorious great men, are displayed in the museum. There are also a variety of different models of steam locomotives made in different time in Britain, America, Japan, Russia, Belgium and other countries. Here you can see a variety of passenger vehicles, such as vintage special bus and national leaders' official cars. There are also different types of rail seat cars, sleeping cars, dining cars, baggage cars and other different functions cars. The history relic in locomotive exhibition hall in China Railway



Museum is not only the microcosm of the development of China's railway, but also the witness of China's history development from the outdated period to the modernization era.

#### • Zhan Tianyou Memorial Museum

Zhan Tianyou Memorial Museum is located in the northern side of Badaling Great Wall, the world famous tourist attraction. It is built to commemorate the establishment of special character Zhan Tianyou. The building area of Zhan Tianyou Memorial Museum is 2 800 square meters, of which the exhibition area is 1 850 square meters. There are more than 2 000 pieces of cultural relic's collection.

Zhan Tianyou (1861–1919) was an outstanding modern scientist, project management expert, and engineering regulations expert in China. He was a pioneer in China's national railway undertakings, as well as Chinese pioneer of modern science and technology community. He graduated from Railway Engineering major, Department of Civil Engineering in Yale University.

The basic display of memorial museum is divided into four parts and twelve units. It vividly demonstrates Mr. Zhan Tianyou's patriotism, innovation, struggle, self-reliance glorious life through objects, pictures, charts, sand table model, scene recovery, multimedia video, touch screen and other forms and means.

(825 words)





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# 卓越英语 综合教程 2

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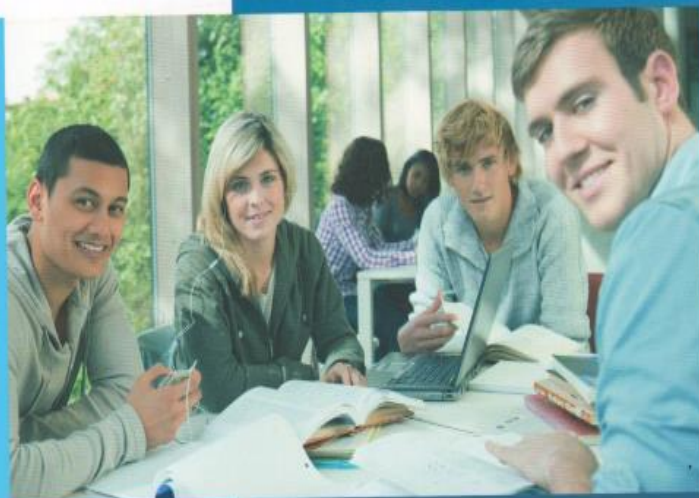
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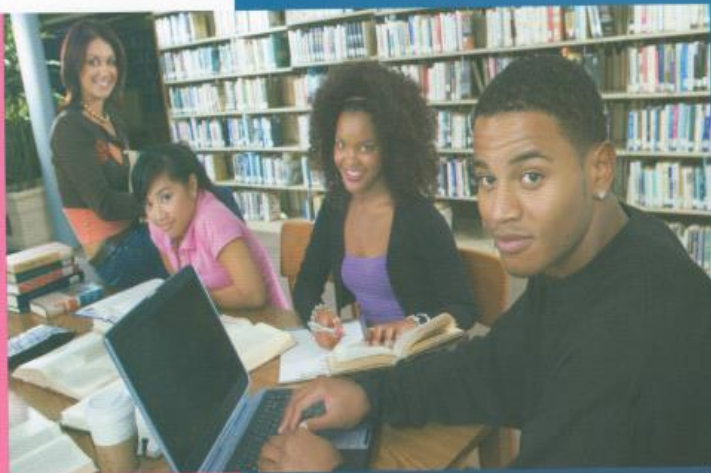
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# 4

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# 中外铁路文化 英语教程

A Glimpse  
into Railway  
Culture



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## 前言

《中外铁路文化英语教程》是在线开放课程《中外铁路文化之旅》(已在“中国大学慕课”平台上线)的配套教材,旨在通过地道生动的语言、实用丰富的知识、多样的练习来培养学生与铁路文化相关的听、说、读、写、译等英语技能和行业交流能力,培养学生跨文化交际意识。在此目标下,本教程充分考虑当前社会的要求,在整体结构和选材等方面均有一定的创新性。

### 教程定位

本教程响应“一带一路”背景下“高铁走出去”的市场需求,开展铁路工程领域的文化通识教育,在编写设计上充分体现教、学的相互结合,选材全面、生动,题材生动、体裁丰富、语言材料多样。本教程既可以作为交通工程专业本科及硕士研究生的专业必修课或选修课的教材,也可以作为非工程专业学生的选修课或拓展课的教材,同时亦可作为涉外工程技术人员和管理干部学习与培训的专用教材。

### 编写原则

《中外铁路文化英语教程》全面贯彻 2007 年国家出台的《大学英语教学要求》(以下简称“《课程要求》”)对大学英语教学性质、教学目标、教学模式、教学评估、教学管理等方面所做的要求。本教材注重加强铁路文化通识英语和专业英语知识教学,增加学生的社会、文化、科学等基本常识;拓宽国际视野,培养跨文化交际的意识,为将来在国际交流中学以致用打下基础。

### 教程特色

本教材是迄今为止在铁路文化英语领域中的第一本教程。鉴于中国学生学习专业英语的现状和特点,该教材的设计充分注重教学的互动性,并充分发挥在线开放课程教学的优势,开展慕课线上与线下综合教学演练活动,充分体现英语教学的丰富性、文化性和趣味性。

1. 题材广泛,知识点丰富。该教程编写内容包括中外铁路发展历史、火车



头类型、车站文化、影视铁路、铁路精神等话题，每个单元围绕该主题的相关知识点逐步展开。可供铁路行业技术、管理和业务人员，以及大专院校相关专业师生参考使用。

2. 内容编排循序渐进，练习设计合理。教程的编写既吸收了编写人员多年铁路英语教学经验，又充分顾及中国学生的思维方式和专业英语学习的困惑。内容编排循序渐进，课前课后练习相互呼应。

3. 本教程的设计注重专业语言知识的输入与输出的结合。以注重培养学习者的实际专业英语运用能力为目标，本教材把专业知识的传授（知识导入、文化输入和语言点学习）和后期的语言文化输出（填空、讨论等）相结合，环节设计注重实用性和可操作性。

4. 本教程选材注重正确的思想价值观引导，内容以单元融入的形式展开，包括：中国铁路劳工、铁路与二次世界大战、詹天佑建京张铁路、茅以升与钱塘江大桥、张鲁新与青藏铁路等故事分别融入世界铁路发展、中国铁路发展以及铁路精神等章节。具体以主题热身、语言点学习、阅读、思考讨论等形式展开。地道英语、新鲜图文，体现时代精神与视觉享受。本教材有助于拓展学生知识面的多样性和科学性。

### 主要内容

本书共 8 个单元，每个单元包含课前准备 Warming-up Activities、阅读练习、拓展讨论等部分。内容涉及中外铁路发展历史、火车头类型、车站文化、影视铁路、铁路精神等内容，旨在扩充学生的交通工程专业英语知识，培养其使命担当意识与行业交流能力。同时了解本领域的通识文化知识，以便培养跨文化交际意识、拓宽国际视野，加快融入全球化进程。教材板块的设计充分考虑了中国学生学习文化英语的特点和目标，内容浓缩了大量的专业英语词汇和用语，囊括了多个方向的基本知识和基本概念，内容包括：①导入部分（引入该单元主题的背景知识思考）；②文章阅读（紧扣章节主题，融入铁路故事章节要点）；③词汇与语言点（围绕该单元主题，介绍主题的常用表达等内容）；④课后练习。



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A Practical Translation Course of  
Transportation Engineering English

交通运输工程英语翻译实务教程

主编 陆秀英 廖为应 彭 翠



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## 内容提要

本书以交通运输工程翻译能力素养提升为核心,以实例分析为基础,系统介绍了交通运输工程翻译的基础性知识,涵盖交通运输工程英语特点、翻译原则、翻译技巧、从业者素养、翻译辅助工具等;重点讲授交通运输工程实务翻译技能,如交通运输工程术语的翻译、学术论文摘要的翻译、工程量清单的翻译、图纸的翻译、交通公示语的翻译、铁路工程建设标准的翻译、国际工程项目合同的翻译、标书的翻译、工程项目方案的翻译等,着力提高交通运输工程英语翻译人员的能力素养。

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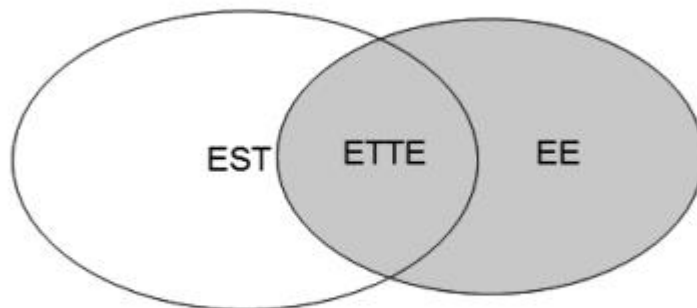
## 第一章 交通运输工程英语概述

专门用途英语 (English for Specific Purposes, 简称ESP), 是相对于通用英语 (General English) 提出的, 是与特定专业和职业相关的英语, 是英语在不同专业范围内的语言变体。Strevens (1988) 对专门用途英语的定义是: “和学校里的通用英语不一样, 专门用途英语课程的目的和内容是由学习者对英语学习的实际需求所决定的。” Hutchinson 和 Waters (1987) 把ESP分成学术英语 (English for Academic Purposes, 简称EAP) 和职场英语 (English for Occupational Purposes, 简称EOP)。

因此, 专门用途英语可理解为与某学科、行业、职业相关的或应用于某学科、行业、职业的英语, 是特定专业或行业领域所使用的英语, 如金融英语、软件英语、科技英语、工程英语、医学英语、生物英语、商务英语、法律英语、旅游英语、计算机英语、航空英语、交通工程英语等。由于涉及专业领域的特殊性, 专门用途英语在某些语法项目、词语的意义、词汇出现率以及句法结构等方面呈现独有的特点和风格。学习专门用途英语的目的是掌握在特定的工作环境中运用英语进行工作的交际能力。

### 一、交通运输工程英语定义及分类

交通运输工程英语 (ETTE, English for traffic and transportation engineering), 是与交通运输工程学科或行业相关的英语。它既属于科技英语 (EST, English for science and technology), 又是工程英语 (EE, Engineering English) 的组成部分, 三者之间的关系如下图所示:



交通运输工程 (Traffic and Transportation Engineering/Transportation Engineering) 是关于铁路、公路、水路及航空运输基础设施的布局及修建、载运工具运用工程、交通信息工

程及控制、交通运输经营和管理的工程领域,涉及铁路、公路、港口、海洋、航道、机场工程勘察、设计、施工与养护,机车、汽车、船舶及航空器运用工程,铁道、公路、水路、航空信息工程及控制,铁路、公路、水路及航空运输规划、经营和管理。概括起来,交通运输工程主要涉及四方面:交通基础设施的布局和修建、车辆的设计和制造、交通运输的管理和营运以及交通信息的控制。

围绕这四方面,交通运输工程英语的涉及面非常广泛,几乎涵盖了各个领域,包括桥梁工程、道路工程、航空工程、船舶工程、岩土工程、轨道交通、物流工程、车辆工程、信息控制工程、交通运输系统等。

交通运输工程翻译是指将交通运输工程领域的工程项目文件、技术资料、研究报告、学术论文等相关材料翻译成所需的目标语。交通运输工程翻译内容大致分为三类。

(一) 学术研究类:与交通运输工程学科相关的研究论文、报告、文献资料、研究成果等的翻译

#### 例1

原文:国内外学者在轨道动力学模型的建立与方法的研究方面做了许多工作,并取得了丰富的研究成果。轨道动力学模型与方法的研究经历了一个从简单到复杂的发展过程。从历史上看,移动荷载/车辆结构是结构动力学中尤其是列车轨道系统中最早的实际问题之一。Knothe和Grassie等发表了几篇在频域内轨道动力学和车辆—轨道相互作用研究进展的文章。Mathews采用傅立叶变换的方法(FTM)和移动的坐标系统,解决了任意移动荷载作用在弹性基础无限长梁上的动力问题。傅立叶变换方法属于频域分析法。运用傅立叶变换的方法,Trochanis、Ono和Yamada也做了一些类似的研究工作。Jezequel将轨道结构简化为弹性基础上无限长的Euler-Bernoulli梁,考虑其转动和横向剪切效应,列车荷载为匀速运动的集中力。Timoshenko通过模态叠加,在时域内解决了移动荷载作用于简支梁上的控制微分方程的求解。Warburton用解析的方法分析了相同的问题,并且发现了移动荷载在特定的速度下梁的挠曲将达到最大。

译文:Up to the present, scholars both at home and abroad have achieved a wealth of research findings about the establishment of track dynamics models and numerical methods. Studies on track dynamics models have experienced a development process from simple to complex. Historically, moving loads and vehicle structures have been the earliest practical issues in structure dynamics, especially in the train track system. Knothe and Grassie published several papers concerning track dynamics and vehicle-track interaction in frequency domain. Mathews found out solutions to the dynamic problems of any moving loads on infinite elastic foundation beam by means of Fourier transform method (FTM) and the moving coordinate system. The Fourier transform method (FTM), as a method of frequency domain analysis, was applied by



## 二、交通运输工程英语的特点

作为科技英语与专门用途英语的一种语言变体，交通运输工程英语以传递交通运输工程相关信息为导向，具有客观、严谨、简洁的特点。如ramp metering（匝道控制）的定义“① The process of facilitating traffic flow on freeways by regulating the amount of traffic entering the freeway through the use of control devices on entrance ramps; ② The procedure of equipping a freeway approach ramp with a metering device and traffic signal that allow the vehicles to enter the freeway at a predetermined rate”，对匝道控制的作用、方法以及方式进行非常客观和严谨的描述。下面这段是关于高速公路测试的注意事项。

### 例1

Proper traffic lane closure and traffic control and diversion must be provided for safety reason for high speed road (HSR). If possible, tests shall be performed in line with cyclic lane closure program on maintenance of HSR. In this connection, Expressway Works Permit is required in HSR. For other roads, proper traffic arrangements shall be made if revealed necessary during pre-test visits. Testing in road sections with limited sight distance shall be performed with great care or avoided if necessary.

译文：在高速公路上测试时，为安全起见，必须采取相应的车道封闭、交通控制和分流。如果可能，测试最好选在高速公路养护周期中对车道进行封闭的时候进行。在这期间，相关人员需要配有高速公路上的工作许可证。对于其他公路，如果测试前的调查发现有必要，则应当作出相应的交通调整。在视距有限的路段上测试时要特别小心，必要时应尽量避免在其上面进行测试。

分析：原文中对于高速公路测试时车道封闭和交通控制的说明信息客观明确，句子之间通过“if possible”“in this connection”“for other roads”等衔接，连贯又简洁。

从词汇、结构和句子等层面分析，交通运输工程英语有以下特点。

### （一）大量专业术语或词汇，术语常用缩略形式

#### 例2

交通运输工程英语因其专业性，出现大量相关专业技术词汇和术语。

Annual inspection is mandatory for all diesel vehicles; all natural gas, gasoline and alcohol vehicles except for new vehicles registered in the current year; all motorcycles and motorbikes, independent of year of fabrication (two-stroke engines are exempt).

译文：强制性年检的车辆包括：柴油机动车，天然气、汽油、乙醇动力机车（当年注册的新车除外），摩托车和电动自行车（不考虑出厂年限，二冲程发动机的摩托车免检）。

分析：原文中的年检车辆类型有专业英语词汇对应，如diesel vehicles, natural gas, gasoline and alcohol vehicles, motorcycles and motorbikes等。

## 例5

The process is often begun with the removal of earth and rock by digging or blasting, construction of embankments, bridges and tunnels, and removal of vegetation (this may involve deforestation) and followed by the laying of pavement material.

译文：道路施工过程通常先是岩土的挖掘或爆破，填筑路堤，建造桥梁和隧道，铲除植被（可能涉及森林采伐），然后铺筑路面材料。

## 例6

Processes during earthwork include excavation, removal of material to spoil, filling, compacting, construction and trimming.

译文：土方工程包括挖掘、铲除次品材料、填筑、压实、建设施工和修整。

## 例7

Geosynthetics perform four main functions in roads: separation, reinforcement, filtration and drainage; which increase the pavement performance, reduce construction costs and decrease maintenance.

译文：道路中土工合成材料的使用需满足四大主要功能：隔离、加固、过滤和排水，这样能提高路面的使用性能，降低施工造价，减少维护费用。

分析：例5中的removal、digging、blasting、construction、deforestation、laying，例6中的excavation、removal、filling、compacting、construction、trimming以及例7中的separation、reinforcement、filtration、drainage等名词化结构均包含了动词或形容词意义，表示动作、过程或状态等信息，语法结构高度浓缩，逻辑关系紧密。

### （三）复杂句多，被动语态多，且广泛使用后置定语结构或从句

交通运输工程英语的句式结构复杂，表意严谨，描述客观精确，它包含各类短语、从句和分句，修饰成分环环相扣。复杂句式主要有长句、被动句和后置定语结构与从句。

## 例8

Transportation engineering is the application of technology and scientific principles to the planning, functional design, operation and management of facilities for any mode of transportation in order to provide for the safe, efficient, rapid, comfortable, convenient, economical, and environmentally compatible movement of people and goods (transport).

译文：交通运输工程指运用技术和科学原理对任意一种运输方式进行设施规划，功能设计，运营和管理，从而为人员和货物提供安全、高效、快捷、舒适、方便、经济和环保的运输服务。

## 例9

Vehicle inspection is a procedure mandated by national or subnational government in many countries, in which a vehicle is inspected to ensure that it conforms to regulations governing safety, emissions or both.





铁路基础设施构成部件

方梦之(2008)对应用翻译提出达旨、循规、共喻三原则。达旨即达到目的,传达要旨,即要做到准确;循规,意为遵循译入语规范,强调通顺;共喻,是使读者晓畅明白,指要确保译文逻辑清晰。在翻译交通运输工程英语时,为了达到通顺和晓畅,作为译者,一定要熟悉交通运输工程英语的特点,牢记交通运输工程英语词汇、句子、篇章方面的特点,多积累相关专业知识和专业词汇,加强阅读,并增强分析长句各部分之间逻辑关系的能力。

### 三、思考与练习

1. 什么是交通运输工程英语?

2. 交通运输工程英语有哪些特点?

3. 请把下面的段落或句子翻译成中文。

(1) Transportation or transport is the movement of humans, animals and goods from one location to another. Modes of transport include air, land (rail and road), water, cable, pipeline and space.

(2) Transportation system covers movement by all forms of transport, from cars and buses to boats, aircraft and even space travel. The purpose of a transportation system is to coordinate the movement of people, goods and vehicles in order to utilize routes most efficiently.

(3) Traffic and Transportation Engineering (often shortened as transportation engineering) is the application of technology and scientific principles to the planning, functional design, construction, operation and management of facilities for any mode of transportation in order to provide for the safe, rapid, comfortable, convenient, economical, and

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Transportation Engineering:  
An Integrated Coursebook

主 编◎唐 斌 陆秀英

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# Transportation System and Transportation Engineering



In this unit, you are going to:

- learn about the transportation system and transportation engineering;
- talk about the overall transportation system, its function and changes and the basics of transportation engineering;
- write a brief introduction about an engineering project.

## Part 1 Warming up



1. Try to list means of transportation and then classify them into five categories.



- 1) Railway transportation: \_\_\_\_\_
- 2) Road transportation: \_\_\_\_\_
- 3) Waterway transportation: \_\_\_\_\_
- 4) Air transportation: \_\_\_\_\_
- 5) Pipeline transportation: \_\_\_\_\_



2. Try to list the advantages of each transportation mode according to the information below.

Ranking Modes of Transportation

Ranking	Cost	Delivery Speed	Delivery Time Dependability	Risk of Loss & Damage	Number of Points Served
(Best)					
1					
2					
3					
4					
5					
(Worst)					
Legend	 Air	 Water way	 Rail way	 Pipeline	 Road

- 1) Road transportation: \_\_\_\_\_
- 2) Railway transportation: \_\_\_\_\_
- 3) Waterway transportation: \_\_\_\_\_
- 4) Air transportation: \_\_\_\_\_
- 5) Pipeline transportation: \_\_\_\_\_



3. Familiarize with the following terms concerning transportation system and transportation engineering, and then complete the sentences with the right terms.

transportation (交通 / 运输)	project engineer (项目工程师)
technical proposal (技术报价书)	transportation system (交通运输系统)
transportation engineering (交通工程)	the GB standard (中国国家标准)
process flow (工艺流程)	intermodal transportation (联运)
field construction (现场施工)	project execution (项目实施)
operation and maintenance (运行和维护)	

- 1) Good \_\_\_\_\_ is that which provides safe, rapid, comfortable, convenient, economical, and environmentally compatible movement of both goods and people.
- 2) \_\_\_\_\_ cannot be separated from the considerations of social, economic, and political system of the region.
- 3) \_\_\_\_\_ is a very diverse and multidisciplinary field, which deals with the planning, design, operation and maintenance of transportation systems.
- 4) There are mainly five divisions for transportation engineering: highways, rail, air, water and pipeline transportation. Urban and \_\_\_\_\_ are also included as special categories of transportation.
- 5) A \_\_\_\_\_ is usually divided into some elementary phases, such as engineering design, procurement and transportation, and field construction.
- 6) The project team normally consists of \_\_\_\_\_, design engineer, schedule engineer, and various specialists.
- 7) There is much information in the technical proposal, including \_\_\_\_\_, process description, capacity of the plant, performance of the product.
- 8) There are some important documents about engineering projects, such as the inquiry, commercial and \_\_\_\_\_, approval, agreement, protocol, annex, technical appendix.

- 9) We can evaluate the results of \_\_\_\_\_ by four criteria, including quality, time, cost and safety.
- 10) We must comply with and carry out \_\_\_\_\_ when proceeding projects in China.

## Part 2 Oral Communication

### 1. Skim the following passage and answer the questions orally.

Transportation is responsible for the development of civilizations from very old times by meeting travel requirement of people and transport requirement of goods. Transport extends the range of sources of supply of goods to be consumed in an area, making it possible for users to get resources at cheap price and high quality. Transportation has always played an important role in influencing the formation of urban societies.

Negative effects of transportation are dominating too. Growth of transportation has a very unfortunate impact on the society in terms of accidents. All transport modes consume energy and the most common source of energy is from the burning of fossil fuels like coal, petrol, diesel, etc, causing air pollution and respiratory disease. Transportation is a major contributor of noise pollution, especially in urban areas. Noise is generated during both construction and operation. Almost all cities use 20-30 percent of its land in transport facilities. A good transportation system takes considerable amount of land from the society. Aesthetics of a region is also affected by transportation. The social life and social pattern of a community is severely affected after the introduction

1) What roles does transportation play in our life?

Meet \_\_\_\_\_.

Extend \_\_\_\_\_.

Influence \_\_\_\_\_.

Develop \_\_\_\_\_.

2) What disadvantages of transportation are mentioned?

① \_\_\_\_\_

② \_\_\_\_\_

③ \_\_\_\_\_

④ \_\_\_\_\_

⑤ \_\_\_\_\_

⑥ \_\_\_\_\_

## Part 3 Guided Reading

### ★ Passage 1 ★

#### Intelligent Transport Systems

ITS — Intelligent Transport Systems — is a **generic** term for the **integrated** application of communications, control and information processing technologies to the transportation system. The resultant benefits save lives, time, money, energy and the environment. The term “ITS” is flexible and capable of being interpreted in a broad or narrow way. “Transport **telematics**” is a term used in Europe for the group of technologies that support ITS.

ITS covers all modes of transport and considers all elements of the transportation system — the vehicle, the infrastructure, and the driver or user, interacting together **dynamically**. The overall function of ITS is to improve decision making, often in real time, by transport network controllers and other users, thereby improving the operation of the entire transport system. The definition **encompasses** a broad **array** of techniques and approaches that may be achieved through **stand-alone** technological applications or as enhancements to other transportation strategies.

Information is at the core of ITS whether it is **static** or real time traffic data or a digital map. Many ITS tools are based on the collection, **processing**, integration and supply of information. Data generated by ITS may provide **real-time** information about current conditions on a network, or on-line information for journey planning, enabling highway authorities and agencies, road operators, public and commercial transport providers and individual travelers to make better informed, safer, more coordinated and more “intelligent” decisions or “smarter” use of networks. Relevant ITS services include:

- **intelligent speed adaptation**;
- assistance for **vulnerable** road users;
- weather and road condition **monitoring** and information;
- incident detection and warning systems;
- **collision** warning systems;
- emergency vehicle **priority**;
- driver monitoring systems;
- speed and traffic signal **enforcement**;



- **hazardous** load monitoring;
- cargo **screening**;
- driver vision enhancement systems;
- **evacuation** route signing and priority;
- homeland security **initiatives** such as **deployed** in the U.S.A.;
- people with a disability will benefit from better visual and audio presentation of information.

ITS services can make transport safer and more secure. They can maximize its capability to contain and reduce the impact of disasters, natural and man-made, e.g. by forward planning, cutting emergency service response times, and securing and prioritizing disaster evacuation routes. They can deliver **sustained** reductions in both the numbers and severity of accidents, by **alerting** travelers to dangerous conditions and situations, and, if necessary, intervening in the driving task. They can enforce safety regulations, **deter** dangerous driving, monitor hazardous loads and screen suspect vehicles and containers. They can protect vulnerable road users by making them more visible to drivers, by giving **pedestrians** and cyclists control over their use of crossings, or by automatically reducing the speed of approaching vehicles or helping the driver with visual aids or alerts.

ITS relies on a wide range of enabling technologies and functions:

Communications:

- Microwave, short-range radio and **infrared-based dedicated** short-range communications (DSRC) — used for EFC; commercial vehicle operations (CVO) **pre-clearance**.
- Mobile communications — used for real-time travel information; **fleet** management; emergency response.
- The Internet — used for real-time travel information; trip planning; traffic images; payment.

Geographical Location:

- Global **navigation** technology (GNSSCN) — used for satellite-based position finding for automatic vehicle location (AVL); **tracking and tracing**; distance-based EFC.

Geographical Information Systems:

- Used for location-based databases of transportation networks, location-based services and other features.

Data **Acquisition** and Exchange:

- Used for real-time traffic management and information.

Camera Systems and Artificial **Vision**:

- Used for enforcement and security.

Detection and Classification:

- Used for traffic management, incident management; **compliance**: safety; security.

In-vehicle Systems:

- Used for travel information, vehicle control systems, accident avoidance.

Digital Mapping:

- These are databases of road and transportation networks stored on digital media (e.g. CD-ROM) using agreed data dictionaries and standardized location referencing. Digital maps are a key **building block** for ITS.
- Used for traffic management, traffic information, route guidance, car park management and **routing**, lorry route monitoring; recreational facilities direction.

### Notes

1. Intelligent Transportation System (ITS), 智能交通系统, 是将先进的信息技术、数据通讯传输技术、电子传感技术、控制技术及计算机技术等有效地集成运用于整个地面交通管理系统而建立的一种在大范围内全方位发挥作用的实时、准确、高效的综合交通运输管理系统, 它是未来交通系统的发展方向。
2. DSRC (Dedicated Short Range Communication), 专用短程通信是智能交通系统领域中专门用于机动车辆在高速公路等收费点实现不停车自动收费 EFC (Electronic Fee Collection) 的技术, 也就是长距离 RFID 射频识别 (又称电子标签 E-tag)。通过路边设备 RSU 与车载设备 OBU 之间的通信建立, 使得机动车辆 (装有 OBU) 在中速 (50-60 公里/小时) 情况下通行在下部置有 RSU 天线的门架时实现车辆与路边设备 RSU 的数据交换, 应用于 EFC 就是自动收费 (记录、只读功能) / 管理 / 信息交换传输 / 结算系统。
3. Commercial Vehicle Operations (CVO), 商用车辆运营系统, 专为运输企业提高盈利而开发的智能型运营管理技术, 目的在于提高商业车辆的运营效率和安全性。它以卫星、路边信号标杆、电子地图的控制中心和车辆通过数据通信为依托, 利用车辆自动定位、车辆自动识别、车辆自动分类和动态称重等设备, 辅助企业的车辆调度中心对运营车辆进行调度管理, 及时掌握车辆的位置、货物负荷情况、移动路径等车辆的有关信息, 提高车辆的使用效率, 降低企业的运营成本。
4. Global Navigation Technology (GNSSCN), 全球导航卫星系统, 泛指所有的卫星导航系统, 包括全球的、区域的和增强的, 如美国的 GPS、俄罗斯的 Glonass、欧洲的 Galileo、中国的北斗卫星导航系统, 以及相关的增强系统, 如



2. Work in groups and discuss the following questions.

- 1) What services of ITS have been enjoyed by people? Please list some examples.
- 2) What technologies are applied in ITS?
- 3) What are the advantages of ITS?
- 4) What are the other possible services of ITS in the future?



3. Match the following Chinese expressions with the English equivalence.

- |               |  |
|---------------|--|
| 1) 全球导航卫星系统   | A. cargo screening                       |
| 2) 专用短程通信     | B. intelligent speed adaptation          |
| 3) 车载系统       | C. emergency vehicle priority            |
| 4) 智能交通系统     | D. load monitoring                       |
| 5) 交通运输远程信息处理 | E. real-time traffic information         |
| 6) 实时交通数据     | F. Intelligent Transport System (ITS)    |
| 7) 智能速度适应器    | G. transport telematics                  |
| 8) 紧急车辆优先     | H. dedicated short-range communications  |
| 9) 负载监控       | I. global navigation technology (GNSSCN) |
| 10) 货物检查      | J. in-vehicle system                     |



4. Read the following sentences taken from Passage 1 and try to translate them into Chinese.

- 1) ITS — Intelligent Transport Systems — is a generic term for the integrated application of communications, control and information processing technologies to the transportation system.  
\_\_\_\_\_
- 2) The overall function of ITS is to improve decision making, often in real time, by transport network controllers and other users, thereby improving the operation of the entire transport system.  
\_\_\_\_\_
- 3) Data generated by ITS may provide real-time information about current conditions on a network, or on-line information for journey planning, enabling highway authorities and agencies, road operators, public and commercial transport providers and individual travelers to make better informed, safer, more coordinated and more “intelligent”

## Part 4 Guided Project Procedure

### — International Project Contracting and Implementation

国际工程承包 (International project contracting) 是指一个国家的政府部门、公司或项目所有人 (the Employer) 委托国外的工程承包商 (the Contractor) 负责按规定的条件完成某项工程任务。国际工程项目采购或交付过程 (project procurement / delivery process) 是指通过努力从项目组织外部获得物料、工程和服务的整个采办过程, 涉及到雇主、雇主委托管理承包的咨询工程师 (the consulting engineer / the contract administrator) 以及承包商 (the Contractor) 三方。项目采购或交付过程一般分为三个阶段:

1. 招投标阶段 (tendering stage)
2. 合同谈判和签订阶段 (contract negotiation and signing stage)
3. 施工阶段 (construction stage)

国际工程项目承包合同分为: 1. 分项工程承包合同 (separate / divided contracts)。发包人将总的工程项目分为若干部分, 发包人分别与若干承包人签订合同, 由他们分别承包一部分项目, 每个承包人只对自己承包的项目负责, 整个工程项目的协调工作由发包人负责。2. “交钥匙”工程承包 (turnkey contracts)。跨国公司为东道国建造工厂或其他工程项目, 一旦设计与建造工程完成, 包括设备安装、试车及初步操作顺利运转后, 即将该工厂或项目所有权和管理权的“钥匙”依合同完整地“交”给对方, 由对方开始经营。3. “半交钥匙”工程承包 (the semi turnkey project contracting)。承包人负责项目从勘察一直到竣工后试车正常运转符合合同规定标准, 即可将项目移交给发包人。它与“交钥匙”工程承包合同的主工区别是不负责一段时间的正式生产。4. “产品到手”工程承包 (products in hand project contracting)。承包人不仅负责项目从勘察一直到正式生产, 还必须在正常生产后的一定时间 (一般分为二、三年) 内进行技术指导 and 培训、设备维修等, 确保产品符合合同规定标准。

工程项目建设程序 (procedures for engineering project construction) 是指工程项目从策划 (planning)、评估 (evaluation)、决策 (decision)、设计 (design)、施工 (construction) 到竣工验收 (completion acceptance)、投入生产或交付使用 (putting into production or service) 的整个建设过程中。工程项目主要包括以下阶段:

1. 项目建议书阶段 (project proposal stage)
2. 项目可行性研究阶段 (feasibility evaluation stage)
3. 项目勘察设计阶段 (project survey & design stage)

4. 项目开工准备阶段 ( project construction preparation stage )
5. 项目施工阶段 ( project construction )
6. 项目竣工验收阶段 ( completion acceptance stage )
7. 项目后评价阶段 ( post evaluation stage )



1. Work in groups to analyze the opportunities and risks involved in international engineering project contracting and construction.



2. Write a brief project introduction based on the project information below and try to present it to the class.

#### 北京通州项目介绍

项目性质: 新城开发建设 ( 土地一、二级开发 )

项目位置: 新城核心地带

项目规划面积: 25.8 平方公里

项目开发面积: 15,000 亩

项目实施步骤: 一期: 15.8 平方公里; 二期: 10.0 平方公里

新城产业主导: 文化产业

项目内容: 城市整体形象提升工程 ( 建桥、修路、建景观、拓宽河道 ); 目标地块的拆迁、征地、市政基础设施及地上物建设; 投资建设商务办公、居住、酒店、商业设施、文化设施、医院、学校

项目开发期间: 2009 / 12—2014 / 12



## Part 5 Extended Knowledge

### Famous Transportation Projects in the World

#### 1. Canada's Ice Road ( 加拿大的冰路 )

This 353-mile road in Canada's Northwest Territories is the world's longest heavy-haul ice road, with more than 300 miles constructed over frozen lakes — and it has to be rebuilt every year. Starting in January, workers fight wind-chills that drop to 50 below, using water trucks, bulldozers, and plows as they build an eight-lane highway that, as the ice below thickens, can support eight-axle big rigs. To test the safety of the road, workers use high-tech radar to profile the ice sheet and, if needed, water trucks add water to increase the thickness of the ice, which can exceed 42 inches. Once completed, loaded trucks are limited to speeds of up to 15 mph over ice and 18 mph over the 64 land portages. And the procession of vehicles is nearly continuous, owing to the small two-month window during which conditions allow safe transit. By mid-April, the road is closed, with Mother Nature converting the icy stretches back to impassable, frigid waters.

#### 2. Transatlantic Tunnel ( 大西洋海底隧道 )

New Yorkers longing for a carryout lunch of bangers and mash from a London pub, fret not: a Transatlantic Tunnel could make such a craving a reality. The hypothetical tunnel would whisk travelers between Manhattan and London in trains that reach speeds of 5,000 m / h, making the 3,100-mile-long connection in less than an hour. Technically, the project would be daunting, with the floating tunnel tethered to massive anchors sunk into the sea floor. More than 50,000 tunnel sections would be required, each transported into place by a gargantuan immersion pontoon. For those looking for a truly international experience, connections between London and Paris could also be offered, enabling New Yorkers to grab a Nutella crêpe along the Champs-Élysées and return to their office in less time than it takes to lunch at a neighborhood Applebee's.

#### 3. New York's Second Avenue Subway ( 纽约的第二大道地铁 )

Plans for a subway line along Manhattan's Second Avenue were proposed as early

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# ENGLISH FOR TRAFFIC ENGINEERING

VIEWING, LISTENING & SPEAKING

## 交通工程英语视听说

主编 孟冬梅 杜默君



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## 内容提要

本书在编写设计上充分体现教与学的相互结合,选材全面、生动、新。说技能训练紧密契合,题材生动、体裁丰富、语言材料多样。教材的设计充分注重教学的互动性,并发挥多媒体教学的优势,开展视、听、说综合实践演练活动,充分体现英语教学的实用性、文化性和趣味性。本书既可以作为交通工程专业本科生及硕士研究生专业必修课或选修课教材,也可以作为非工程专业学生的选修课或拓展课教材,同时亦可作为涉外工程技术人员和管理干部学习和培训专用教材。

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# Unit 1

## Traffic Services

### Learning Objectives

- ★ To get to know some basic types of traffic service
- ★ To figure out a way to cope with congestion in the city
- ★ To understand some information related School Transport Services
- ★ To learn the latest information about electric autonomous flying vehicles



## I. Warming-up Questions

**Q1: Do you know how to say these occupations in English? Please match each English occupation (1—7) with its Chinese translation (a—g).**

- |                                   |            |
|-----------------------------------|------------|
| 1. air traffic controller         | a. 校车司机    |
| 2. ground transit operators       | b. 汽车服务技师  |
| 3. light rail transit operator    | c. 运输操作员   |
| 4. school bus driver              | d. 运输管理员   |
| 5. transit operator               | e. 轻轨操作员   |
| 6. transit administrator          | f. 空中交通管制员 |
| 7. automotive service technicians | g. 地面运输操作员 |

**Q2: Look at the following pictures. Do you know the information related to traffic services? Match the words with the corresponding pictures.**



Air traffic control service



Traffic control vehicles



Deep Water Harbour



Air traffic service

Vessel traffic service



Subway service



## Words and Phrases

controller [kən'trəʊlə(r)]	<i>n.</i>	管理者; 控制者
transit ['trænsɪt,-zɪt]	<i>n.</i>	通过; 搬运; 转变; 运输线
light rail transit, LRT		轻轨
mechanical [mi'kænik(ə)l]	<i>adj.</i>	机械的
subway ['sʌb,weɪ]	<i>n.</i>	地铁, 地下通道
Vessel ['vesəl]	<i>n.</i>	船舶, 船只

## II. Pre-listening Activities



Jonas Eliasson is dedicated to researching transportation flow, analyzing how people think about their commutes and what can influence their travel decisions. Listen to how he describes about the city transportation and fill in the blanks with the words and expressions mentioned in the video.

European cities

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American cities

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The emerging world cities

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Measures for city planners to cope with congestion:

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Words and Phrases

congestion [kən'dʒestʃən]	n.	阻塞, 充血, 拥挤, 堵车
commission [kə'mɪʃ(ə)n]	v.	委托
pervasive [pə'veɪsɪv]	n. & adj.	普遍的, 扩大的, 渗透的, 弥漫的
disperse [dɪ'spɜ:rs]	vt. & vi.	(使) 分散, (使) 散开, 散播
attempt [ə'tempt]	vt.	尝试, 试图
essentially [ɪ'senʃəli]	adv.	本质上, 根本上, 本来

### III. While-listening Activities

#### Part I Traffic Jams

##### Video One

 A. Listen to the report on How to Solve Traffic Jams, and choose the best answer from A, B, C and D to complete the following statements.

- When you try to solve really complex social problems, the right thing to do is \_\_\_\_\_.  
 A. to plan what other people should do  
 B. to plan their life for them  
 C. plan the details carefully  
 D. to help people to figure out what to do, how to adapt to this new framework
- What cause lots of road congestion in Stockholm except \_\_\_\_\_.  
 A. a medium-sized city with a huge population  
 B. lots of water and old bridges  
 C. good public transport  
 D. lots of narrow bridges, old bridges
- Someone came up with an idea to combat road congestion, What is it?  
 A. Try to charge drivers one or two euros.

Words and Phrases

complex [kəm'pleks]	adj. 复杂的, 难懂的, 复合的
self-organizing ['self'ɔ:gənaɪzɪŋ]	adj. 自发组织的
incentive [ɪn'sentɪv]	n. 动机, 诱因, 刺激, 鼓励
bottleneck ['bɒtlnek]	n. 瓶颈, 瓶颈路段
nonlinear [nɒn'liːniə]	adj. 非线性
critical ['krɪtɪk(ə)l]	adj. 决定性的
threshold ['θreʃhəʊld]	n. 门槛, 入口, 开始
substantially [səb'stænjəli]	adj. 充分地, 相当多地

Video Two



A. Listen to the report on How to Solve Traffic Jams. Listen carefully and decide whether the following statements are true (T) or false (F).

- \_\_\_\_\_ 1. The congestion charges were introduced first as a trial, and then abolished again at the end of July.
- \_\_\_\_\_ 2. Once the congestion charges were cancelled, the drivers all came back in the first week.
- \_\_\_\_\_ 3. Seventy percent of the population didn't support for congestion pricing of Stockholm at the beginning.
- \_\_\_\_\_ 4. Thirty percent of the population support for keeping the charges while the congestion pricing were reintroduced.
- \_\_\_\_\_ 5. Most of the car drivers were aware that they actually didn't drive the same way that they used to do (to be slightly away from rush hour).
- \_\_\_\_\_ 6. Most of the car drivers realized that they actually changed their opinion about the congestion pricing.
- \_\_\_\_\_ 7. When trying to solve complex social problems, you should try to persuade people how to adapt.

## Words Bank

availability [ə'velə'bɪləti]	<i>n.</i>	有效, 有益, 可利用性, 可得到的东西 (或人)
reliability [rɪ'laɪə'bɪləti]	<i>n.</i>	可靠, 可信赖
initial [ɪ'nɪʃəl]	<i>adj.</i>	最初的, 开始的, 首字母的
maintenance ['mentənəns]	<i>n.</i>	维护, 维修, 维持, 保持, 保养, 保管
automatically [ˌɔtə'mætɪkli]	<i>adv.</i>	自动地, 无意识地, 不自觉地, 机械地
component [kəm'pəʊnənt]	<i>n.</i>	成分, 组分, 零件, [数] 要素
commitment [kə'mɪtmənt]	<i>n.</i>	承诺, 许诺, 委任, 委托, 致力, 献身, 承担义务
catalogue ['kætəlɒg, -, ʌg]	<i>n.</i>	目录, 一览表, 展览目录, 产品样本

## IV. Let's Talk

## Part I I'd Like to Book a Ticket

A: Pardon me. Where do I buy a ticket?

B: Where are you going?

B: To New York.

A: I think window 6 has New York tickets.

B: Thank you.

A: Give me a ticket to New York, please.

B: One way or round-trip?

A: One way, please.

B: Pullman or coach?

A: I'm sorry I don't understand.

B: A Pullman is a sleeping car and a coach is a sitting car.

A: A Pullman ticket, please.



B: Do you want a berth or a compartment?  
 A: Give me a berth, please.  
 B: Upper or lower?  
 A: Upper, please.  
 B: That'll be \$230.00, please.  
 A: Will I have to change the trains?  
 B: No. This train goes straight through to New York.

## Part II I Failed to Get at The Booking Office

A: My compartment is number 8,porter.  
 B: Number 8 is this way, sir.  
 A: Thanks. By the way, could you tell me what time we get to Los Angeles?  
 B: We get in at nine in the morning.  
 A: All right. Is the dining car open?  
 B: It opens as soon as the train starts.  
 A: Fine. Which way is it?  
 B: It's two cars forward.  
 A: Thank you.  
 B: Ticket, please.  
 A: Certainly. What time do we get into Washington?  
 B: At 4:30.  
 A: Do we make any stops before then?  
 B: Yes, we make one stop over in Philadelphia. May I see your ticket, please?  
 A: Sorry, I didn't get it at the station. I'm going to Philadelphia.  
 B: All right. That's \$27.40, please.  
 A: Here you are. What time do we arrive?  
 B: The train pulls into Philadelphia at 11:07. Here's your change.  
 A: Thank you.

If you are required to design a new means of transport, what factors may you take into consideration?

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### Task 3

**Pair work.** One student is asked to act as a manager and the other student acts as a father (or mother) of a child. The “father” asks the “manager” some questions about the safety of the school bus, as to how to guarantee the safety of the children.

## V. Post-listening Activities

### Task 1

You are going to watch a video clip about Electric Autonomous Flying Vehicle. Watch carefully and fill in the blanks.

### Video One

#### 1. Problem:

In sub-Saharan Africa, for instance, 85 percent of roads are unusable \_\_\_\_\_. Investments are being made, but at the current level, it's estimated it's going to take them 50 years to catch up. In the U.S. alone, there's more than four million miles of roads, \_\_\_\_\_, very expensive to \_\_\_\_\_, with a huge \_\_\_\_\_, and yet, very often, congested.

4. Operating system can not monitors weather data to avoid adverse weather conditions, but it can optimize the routes of the vehicles, avoid other risk factors.
5. The flying vehicles we use should avoid adverse weather conditions, especially when it's very hot and very cold climates, very strong winds.

Words Bank

all-season ['ɔ:l'si:zn]	adj. 全年的, 四季的
sustainable [sə'steɪnəbl]	adj. 可持续的
unusable [ʌn'ju:zəbəl]	adj. 不能用的
infrastructure ['ɪnfra'strʌktʃə]	n. 基础设施, 基础建设
scenario [si'næriəʊ]	n. (行动的) 方案, 剧情概要, 分镜头剧本
autonomous [ɔ:'tɔ:nəməs]	adj. 自治的, 有自主权的, 自主的
logistics [lə'dʒɪstɪks, lə-]	n. 物流

Task 3: Speaking

Pair work. Discuss with your partner the topic traffic services.

Memoral Quotes

If you would go up high,  
then use your own legs! Do not  
let yourselves carried aloft; do  
not seat yourselves on other  
people's backs and heads. ( F. W.  
Nietzsche, German Philosopher)

如果你想走到高处, 就  
要使用自己的两条腿! 不要  
让别人把你抬到高处; 不要  
坐在别人的背上和头上。(德  
国哲学家F.W. 尼采)

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