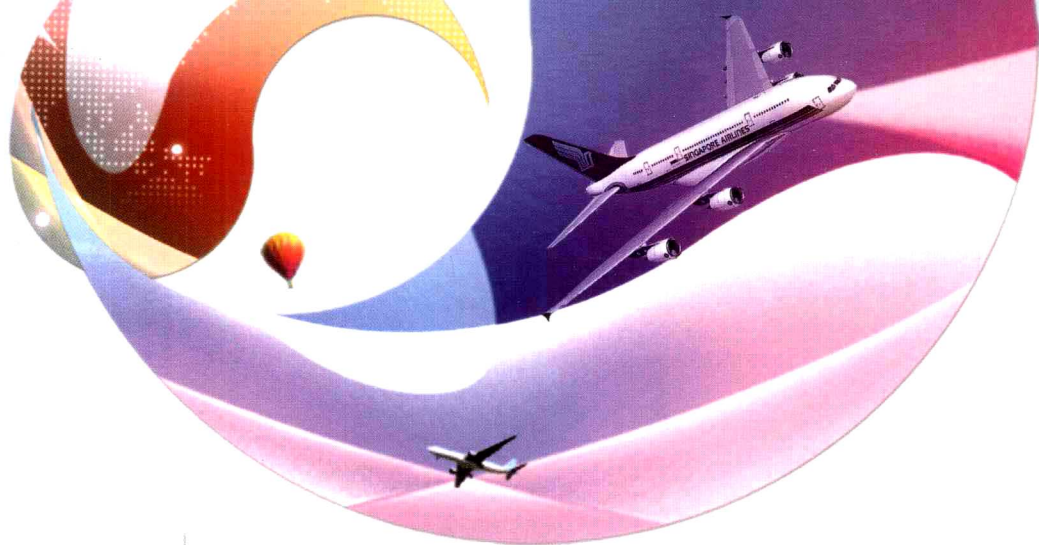




民航英语特色课程系列教材

MINHANG YINGYU TESE KECHENG XILIE JIAOCAI



主 编 ● 李明良

副主编 ● 申卫华 蒲建君 陈华妮

任晓军 朱 敏 何 莉

# 飞行英语阅读

Aviation English  
**for Flight Crew**



西南交通大学出版社

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主编 李明良

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# 前 言

对于飞行员和管制员来讲，无线电陆空通话语言不仅是交流和空地对话的工具，而且是保证航空安全的重要因素之一。

早在1998年，针对飞行人员和管制人员语言能力不足而造成的飞行事故，国际民航组织第32届大会在A32-16决议中就敦促ICAO理事会对ICAO附件1和附件10进行修订，要求参与国际运行的飞行人员和管制员应该具有足够的保证航空安全的英语通讯能力。2003年3月，ICAO理事会推出了针对通讯语言能力的标准和建议措施（SARPs），并对与语言熟练程度相关的附件1、6、10、11和PANS-ATM（空中航行服务程序-空管）进行了修订。2004年，国际民航组织出版了《ICAO语言熟练程度要求执行手册》（ICAO DOC 9835），对与语言熟练程度要求相关的培训和测试做出了具体要求。随后，包括中国在内的很多成员国开始开发研制本国的测试系统或同时为其他国家展开测试服务。

2007年，国际民航组织大会通过了A36-11决议《用于无线电通讯的英语语言熟练程度》，要求各成员国采用全球统一的语言测试标准。在此决议的基础上，国际民航组织先后发布了《促进全球统一化的语言测验标准》（318号通告，2009年6月）和《航空英语培训方案指导原则》（323号通告，2010年）。《促进全球统一化的语言测验标准》要求各成员国根据国际民航组织的语言能力要求处理对候选人的测验事宜，并就航空语言测验方案的制作或选择提供建议的标准；《航空英语培训方案指导原则》是应各主管当局、运营人和服务提供者对制定英语语言培训更详细的指导的请求而与国际民用航空英语协会（ICAEA）联手制作的，以便能有效地实施附件1《人员执照的颁发》中所载的语言能力要求。2010年9月，国际民航组织出版了《ICAO语言熟练程度要求执行手册》（ICAO DOC 9835，第二版），对原有的有关民航语言测试和培训等内容做了较大的修改，对标准和原则做了更加细致的说明，并结合了318号和323号通告对测试和培训的操作标准。

针对国际民航组织的标准，中国民用航空局于2006年启动了针对飞行人员的英语等级执照签注考试，2007年开始PEPEC考试系统的立项和研制，并于2008年开始使用具有中国民航自主知识产权的PEPEC考试系统。中国民航局空中交通管理局于2005年委托中国民航飞行学院开始进行中国民航空管人员英语等级考试系统（AETS）的开发工作，并于2007年12月开始AETS的考试。

作为世界上最大的航空训练机构，中国民航飞行学院是中国民航培养飞行员和空中交通管制员的主力院校。飞行学院的毕业生不仅要满足法规所规定的执照签注要求，还要满足国际民航组织所要求的国际运行所需要的语言熟练程度执行标准。中国民航飞行员和管制员语言能力的提高不仅是保证安全的需要，同时也是中国民航从民航大国迈向民航强国所必须完

成的任务。

中国民航飞行学院外国语学院就是在这样的背景下提出了“民航英语特色课程系列教材”的编写。学院和民航局给予了大力支持，该系列教材的建设成为我校“以英语教学改革为龙头，推动全面教学改革”的教改项目和民航局资助的“国际民航组织英语语言课程建设”项目。

本系列教材共六本：《飞行英语阅读》（李明良主编）《飞行英语听说》（陈方主编）《飞行英语口语》（陈方主编）《飞行英语无线电陆空通话高级教程》（申卫华主编）《管制英语阅读》（郑丽主编）《管制英语无线电通话》（何均洪主编）。该系列教材可用于飞行技术专业 and 空管专业讲授民航英语的高段课程。也可作为航空公司或空中交通管理局培训部的培训教材。

民航英语特色课程系列教材旨在提高飞行技术专业学生和空管专业学生应用英语语言的综合能力、使用英语进行通讯的能力，以及针对一些特殊情况的处理能力。本系列教材从六个方面对学员进行语言能力的培养（语言、结构、词汇、理解、流利程度、应对能力），全面提高学员的交际能力和应用能力。教材的编写全面贯彻国际民航组织（ICAO）新语言标准。

民航英语特色课程系列教材中所编制的情景的主要依据是国际民航组织《语言熟练程度要求执行手册》（ICAO DOC 9835, 2010）、中国民航飞行人员英语等级考试（PEPEC）大纲和民航管制员英语考试（AETS）大纲中所列出的事件和范围，以及近年来世界范围内一些典型的航空事故和事件。

民航英语特色课程系列教材项目总负责人为中国民航飞行学院陈布科副校长，参与编写人员有外国语学院教师、空管学院教师、继续教育学院教师、空乘学院教师、分院民航英语教师、飞行教员、航空公司飞行员，同时由资深教师、资深飞行员和我院外籍教师审定。

民航英语特色课程系列教材编写组

2013年4月

## 编写说明

《飞行英语阅读》是根据国际民航组织飞行员英语语言能力要求,结合国内航空公司对于飞行员英语水平要求和实际飞行、训练需要,形成的具有飞行特色和时代特色的专业英语背景基础知识阅读教材。该教材由书本、光盘、网络等多种载体构成,融汇了国内现行大学英语阅读教材、其他文科教材和之前的民航英语阅读教材的编写理念和模式,旨在帮助民航飞行技术专业大学生奠定民航英语基础知识,培养学生的民航英语综合应用能力。该教材是国内第一本专门提高飞行技术专业大学生民航英语能力的阅读教材,标志着国内民航飞行员专业英语阅读教学迈出探索特色课程建设的第一步。

本教材系飞行英语系列教材之基础教材。全书共 4 个单元,包括 16 课,供已完成大学英语学习的飞行技术专业学生使用。每课包括 Text A 和 Text B 两个部分,各部分包含相关配套练习。

### 一、《飞行英语阅读》的选材

《飞行英语阅读》在选材上立足于飞行技术专业大学生的专业英语学习阶段的语言基础和专业英语基础语言知识学习的需要,同时兼顾国际民航组织飞行员英语水平要求及标准、飞行员实际训练和工作的需要。本书强调“以学生自主学习为中心,教师适时引导”的教学原则。在选材上注重基础性、实用性、全面性、系统性和前瞻性。本书选材涉及飞行知识的四个基本方面:人、机、程序和环境。每个单元内容自成体系,Text A (800~900 字)和 Text B (约 600 字)取材具有典型性,每课力求专业英语知识的系统性,以引导读者在课外进行相关英语语言知识的学习。

### 二、《飞行英语阅读》的主要内容

《飞行英语阅读》每课开头均有 Preview。Preview 言简意赅地点明本课的中心内容。它是本课的导读篇,对于学生课外自主学习具有导示作用。

每课包括 Text A 和 Text B 两个部分。Text A 包括 Warming-up Activities, Passage, New Words, Expressions 和 Notes, Exercises 包括以下几个部分:课文术语解释、理解问题、相关重要题材短文朗读、相关题材短文的选词填空、阅读理解和补充阅读。这种建构形式有别于国内其他阅读教材阅读文本的单一性,其形式和内容以民航飞行英语涉及内容的特点为基础。

Text B 的课文便于学生课外学习,作文练习引导学生运用所学的相关民航英语知识进行写作练习。这便于教师检查,同时为学生提高口语能力奠定基础。

### 三、《飞行英语阅读》的语言练习项目

《飞行英语阅读》在复杂、庞大的飞行英语知识系统中构建了基本合理的课目和单元构架。教材综合国内时新阅读教材的单元练习体例,继承了国内经典阅读教材的有效阅读练习形式,

结合飞行英语知识需要,形成独特而适用的主题—任务性练习体系结构,注重内容全面性、语言知识的习得和语言的实际应用等方面。

术语解释侧重学生应用自己的英语语言知识和专业英语知识对 Text A 中的一些重要术语进行口头或书面的表达练习,同时也可以检查学生对于课文的学习和掌握情况。

课文理解问题的问答有助于学生提高就常见、具体专业性问题的口头表达能力。朗读练习强调语音语调,让学生熟悉重要话题的短文(200字)的语言知识,同时促使学生重视语音语调的标准性。

完型填空和阅读理解题型是两种经久不衰的阅读练习形式,它们能在很大程度上检查学生的语篇理解能力,更重要的是能让学生在这种练习中应用已有专业英语知识分析问题、解决问题,从而提高学生专业英语语言应用能力。这两种练习都以短文文本为对象,既能丰富学生的专业英语背景知识,满足国际民航组织对于飞行人员英语语言能力要求的需要,又传承了国内流行的阅读理解理念和练习形式,强调了民航英语语言学习和应用这一基本理念。

每篇补充阅读文章约500字左右,重要生词都标注了语义,便于学生自主补充有关单元主题的阅读内容和丰富学生的背景知识。

Text B 采用写作练习,让学生应用本课所学知识,结合本部分课文提供的专业英语知识,就某一给定话题进行写作练习,增进相关民航英语知识习得,提高专业话题的记叙、阐述和描述等英文表达能力,在国际民航组织飞行员英语语言能力要求和标准方面具有较强的针对性。

#### **四、《飞行英语阅读》的阅读量和词汇量**

《飞行英语阅读》全书共85 000词,其中精读阅读量约24 000词,练习阅读量约40 000词。

#### **五、《飞行英语阅读》的编者**

《飞行英语阅读》由中国民航飞行学院外国语学院李明良担任主编,编写本教材的多数内容。中国民航飞行学院外国语学院蒲建君、申卫华、陈华妮和任晓军等老师分别参加编写4~6课、7~9课、10~13课和14~16课的部分内容。感谢朱敏老师为教材样式设计与修改等提供的宝贵的建设性意见和做的大量工作。

《飞行英语阅读》由中国民航飞行学院外国语学院民航英语专家刘德仲审定全稿。

《飞行英语阅读》的设计、编写和制作是一个研究现行各种英文阅读教材、探索具有中国民航飞行员特色的新时代民航英语阅读教材的过程。由于编者水平所限,教材中不乏不足之处,诚挚欢迎国内ESP专家、民航界专家、民航英语专家以及使用本教材的广大师生给予批评和指正。

**《飞行英语阅读》教材编写组**

2013年8月

# Contents

|                 |                                     |           |
|-----------------|-------------------------------------|-----------|
| <b>Unit One</b> | <b>Air Crew</b>                     | <b>1</b>  |
| Lesson 1        | Air Crew                            | 2         |
| Text A          |                                     | 3         |
| Text B          |                                     | 13        |
| Lesson 2        | Cockpit and CRM                     | 16        |
| Text A          |                                     | 17        |
| Text B          |                                     | 28        |
| <b>Unit Two</b> | <b>Aircraft Systems</b>             | <b>32</b> |
| Lesson 3        | Aircraft Controls & Aerodynamics    | 33        |
| Text A          |                                     | 34        |
| Text B          |                                     | 46        |
| Lesson 4        | Flight Control Systems & Problems   | 49        |
| Text A          |                                     | 50        |
| Text B          |                                     | 61        |
| Lesson 5        | Hydraulic Power & Landing Gears     | 64        |
| Text A          |                                     | 65        |
| Text B          |                                     | 76        |
| Lesson 6        | Automatic Flight & Instruments      | 79        |
| Text A          |                                     | 80        |
| Text B          |                                     | 92        |
| Lesson 7        | Powerplant, APU & Electrical System | 95        |
| Text A          |                                     | 96        |
| Text B          |                                     | 107       |
| Lesson 8        | Pneumatics & Fuel                   | 110       |
| Text A          |                                     | 111       |
| Text B          |                                     | 122       |
| Lesson 9        | Communication & Navigation          | 125       |
| Text A          |                                     | 126       |
| Text B          |                                     | 137       |

|                               |            |
|-------------------------------|------------|
| <b>Unit Three Procedures</b>  | <b>140</b> |
| Lesson 10 On the Ground       | 141        |
| Text A                        | 142        |
| Text B                        | 153        |
| Lesson 11 Takeoff & Climb     | 156        |
| Text A                        | 157        |
| Text B                        | 167        |
| Lesson 12 Enroute & Approach  | 170        |
| Text A                        | 171        |
| Text B                        | 182        |
| Lesson 13 Landing             | 187        |
| Text A                        | 188        |
| Text B                        | 199        |
| <b>Unit Four Environments</b> | <b>202</b> |
| Lesson 14 Airport             | 203        |
| Text A                        | 204        |
| Text B                        | 215        |
| Lesson 15 Air Traffic Control | 219        |
| Text A                        | 220        |
| Text B                        | 231        |
| Lesson 16 Weather             | 234        |
| Text A                        | 235        |
| Text B                        | 246        |
| <b>Keys to Exercises</b>      | <b>249</b> |
| <b>Appendix I</b>             | <b>253</b> |
| <b>Appendix II</b>            | <b>273</b> |
| <b>References</b>             | <b>278</b> |

# **Unit One**

## **Air Crew**



# ***Lesson 1***

## ***Air Crew***

### **Preview**

The pilot, a vital asset to the survival of any airlines, needs to know what elements constitute a qualified pilot. Text A serves to offer some fundamental knowledge concerning duties and awareness of captains, F/Os, PICs, student pilots, and flight instructors. Text B is centered on the job of cabin crew.

# Text A

## Warming-up Activities

### Picture Description

Please describe the following picture and be prepared to answer some questions.

### Relevant Questions



1. Which airline will you work with after graduation?
2. Why do you want to be a pilot?
3. What should you often do to be a good pilot?
4. What is your long-term plan to be a qualified captain?

## Captain and F/O Duties

There are usually 2-3 flight crew members and 1-3 flight attendants aboard an airliner. In the flight deck are the Captain, Co-pilot and flight engineer. When there are only two flight crew members, to reduce costs there's no flight engineer. <sup>serve</sup> The Captain is the Pilot in Command (PIC) who has the final authority of all decisions and all responsibilities rest on his shoulders. The Co-pilot assists the Captain and does things like calculating fuel consumption, weight and balance, navigation, etc. He is Second in Command (SIC). The Flight Engineer helps reduce the workload of the Captain and Co-pilot. Some of his duties may include calculating fuel consumption rate, weight and balance, and communicating with the cabin crew.

<sup>8/23/13</sup> The Pilot in Command (PIC) of an aircraft is the person aboard the aircraft who is ultimately responsible for its operation and safety during flight. According to ICAO, the Pilot in Command is responsible for operating an airplane in accordance <sup>188-32</sup> with rules of the air, and has final authority as to the disposition of the airplane while in command. This would be the "captain" in a typical two- or three-pilot flight crew, or "pilot" if there is only one certified and qualified pilot at the controls of an aircraft. The PIC must be certified to operate the aircraft for the specific flight and flight conditions, but need not be actually controlling the



aircraft at any given moment. The PIC is the person legally in charge of the aircraft and its flight safety and operation, and would normally be the primary person liable for a violation of any flight rule. *responsible*

According to FAA, the PIC is responsible for the operation and safety of the aircraft during flight time, which means the total time from the moment an aircraft first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight. This would normally include taxiing, which involves the ground operation to and from the runway. But it is legal for a mechanic or other person to taxi an aircraft on the ground for the purpose of moving it from one spot to another without a pilot's license.

As the FAA puts it, the pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft. In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency. Each pilot in command who deviates from a rule of this section shall, upon the request of the administrator, send a written report of that deviation to the administrator. *ATIS*

Especially interesting is FAR 91.3, which empowers the PIC to override any other regulation in an emergency, to take the safest course of action at his/her sole discretion. It essentially gives the PIC the final authority in any situation involving the safety of a flight, irrespective of any other laws or regulations. In commercial aviation, the first officer is the second pilot (or co-pilot) of an aircraft. The first officer is second-in-command of the aircraft. In the event of incapacitation of the captain, the first officer will take on the duties of the PIC. Control of the aircraft is normally shared equally between the first officer and the captain, with one pilot being the "Pilot Flying" (PF), and the other the "Pilot Not Flying" (PNF), or "Pilot Monitoring" (PM), for each flight. Even when the first officer is the flying pilot, however, the captain remains ultimately responsible for the aircraft, its passengers, and the crew. In typical day-to-day operations, the essential job tasks remain fairly equal.

Because many airlines promote by seniority only within their own company, the first officer may at times have more flight experience than the captain, in that they may have experience from other airlines or the military. Traditionally, the first officer sits on the right-hand side of a fixed-wing aircraft and the left-hand side of a helicopter. (686 words)

## NEW WORDS

crew

/kru:/

n.

人员, 组员

airliner

/'eə.lainə/

n.

公司班机



|                |                    |                    |                   |
|----------------|--------------------|--------------------|-------------------|
| captain        | /'kæptɪn/          | n.                 | 机长                |
| command        | /,kə'mɑ:nd/        | n. & v.            | 指挥; 指令            |
| authority      | /ɔ:'θɒrɪti/        | n.                 | 权威, 权限            |
| fuel           | /fju:əl/           | n.                 | 燃油                |
| navigation     | /,nævi'geɪʃən/     | n.                 | 导航; 领航            |
| communicate    | /kə'mju:nikeɪt/    | v.                 | 交流; 通讯            |
| briefing       | /bri:fiŋ/          | n.                 | 讲述; 讲评            |
| emergency      | /i'mə:dʒənsi/      | n.                 | 紧急                |
| procedure      | /prə'si:dʒə/       | n.                 | 程序                |
| evacuation     | /i:ˌvækju'eɪʃən/   | n.                 | 撤离                |
| aircraft       | /'eəkrɑ:ft/        | n.                 | 飞机; 航空器           |
| operation      | /,ɒpə'reɪʃən/      | n.                 | 运转, 工作, 操作        |
| disposition    | /,dɪspə'zɪʃən/     | n.                 | 处置, 处理            |
| certify        | /'sə:tɪfaɪ/        | v.                 | 认证; 认可; 证明        |
| manipulate     | /mə'nɪpjuleɪt/     | v.                 | 操纵                |
| taxi           | /'tæksi/           | n. & v.            | 滑行                |
| runway         | /'rʌnwei/          | n.                 | 跑道                |
| mechanic       | /mi'kænik/         | n.                 | 机务员, 机械人员         |
| license        | /'laɪsəns/         | n. & v.            | 执照; 授证            |
| deviate        | /'di:vieɪt/        | v.                 | 偏离( <i>from</i> ) |
| administrator  | /əd'mɪnɪstreɪtə/   | n.                 | 管理人               |
| discretion     | /dɪs'kreʃən/       | n.                 | 决定                |
| override       | /,əʊvə'reɪd/       | vt.                | 超控                |
| provision      | /prə'vɪʒn/         | n.                 | 条款                |
| justification  | /,jʌstɪfɪ'keɪʃn/   | n.                 | 证明                |
| incapacitation | /,ɪnkəpə'si'teɪʃn/ | n. <i>capacity</i> | 失能                |
| airline        | /'eəlaɪn/          | n.                 | 航空公司              |
| seniority      | /,si:ni'ɔ:rəti/    | n.                 | 资历                |
| wing           | /wɪŋ/              | n.                 | 机翼                |
| helicopter     | /'helɪkɒptə/       | n.                 | 直升机               |

transit

处境.

## EXPRESSIONS

flight crew 机组人员

flight attendant 空中乘务员

flight engineer 飞行机械师

Pilot Flying 操纵飞机飞行员

Pilot Not Flying 未操纵飞机的飞行员

Pilot Monitoring 监控飞行员

Pilot in Command 责任机长

First Officer 副驾驶

## NOTES

|      |                                           |              |
|------|-------------------------------------------|--------------|
| ICAO | International Civil Aviation Organization | 国际民航组织       |
| FAA  | Federal Aviation Administration           | 联邦航空局（美国）    |
| FAR  | Federal Aviation Regulations              | 《联邦航空条例》（美国） |

## EXERCISES

### Comprehension of Text A

#### **I. Describe the given aviation terms from Text A in English.**

- |                        |                             |
|------------------------|-----------------------------|
| 1. flight deck 飞行甲板    | 2. PIC The pilot in command |
| 3. incapacitation 丧失能力 | 4. flight time 飞行时间         |
| 5. captain 机长          | 6. PNF                      |

#### **II. Answer the following questions after you have read Text A.**

1. What crew members are included in an airplane?
2. What are the duties for different crew members?
3. In what condition will the co-pilot take on the responsibility of commanding an aircraft?
4. Can you tell the differences between PIC, captain and pilot?
5. According to FAA, what are the responsibility and authority of PIC?
6. According to ICAO, what is the Pilot in Command responsible for?
7. Why does FAR give final authority to PIC in an emergency?
8. Should PF always be the Pilot in Command? Give your reasons.
9. Why do some First Officers have more experience than their captains? Can you give an example?
10. Where does the first officer normally sit in a helicopter?

### Reading Aloud

#### **III. Read the following paragraph aloud until you can say it in a natural way from your memory.**

Learning to fly from a flight instructor (飞行教员) is one of the most exciting and costly

opportunities that student pilots can have. He will be the most influential person in our careers to fly.

**Instructors are life savers.** Making a mistake in a plane can lead to a lot of problems unless the instructor is qualified. Often, the quality of a pilot, especially in the early stages, is a reflection of the quality of the person who has taught them. During flight training, the instructor will save us and the aircraft from many of mistakes, which are possibly fatal. Therefore, an instructor is supposed to have appropriate experience and knows how to correct the problem, or in extreme cases, to take over and save both of our lives.

**Good instructors make great pilots.** It is important to have a strict instructor who will work with us in order to reach perfection. A patient instructor can make young pilots feel confident in their abilities. Also, teaching technique is very important. Many instructors prefer to teach in briefing rooms before taking students up into the air. Others bring students up in the air right at the beginning and teach them how to fly by having them fly. (205 words)

## Vocabulary

### IV. Complete the following short passage by filling the blanks with the words given in the box.

optimal airplanes while transport regulations flight  
turns functioning in-flight communicate

#### Airline Pilots

Airline pilots 1 transport passengers and cargo (货物) via commercial aircraft. They are responsible for various 2 in-flight and non-flying duties. Airline pilots are responsible for a variety of tasks related to the safe operation of the 3 airplanes they are responsible for flying.

Prior to takeoff, airline pilots are responsible for verifying that the instruments (仪表), controls, engines, and other flight systems are 4 functioning the way they should. Monitoring continues throughout the 5 flight, and changes are requested and implemented as needed 6 while en route (航路上).

On commercial flights, there are two pilots at the helm of the airplane. Each flight is staffed by a captain and a first officer, and the two pilots typically take 7 optimal flying different legs (航段) of each trip. They 8 communicate with flight dispatchers (签派人员), air traffic controllers, and meteorologists to select the best route (航线) for their trip, including determining the 9 optimal altitude and speed for travel.

Once a flight lands, airline pilots are required to complete records about their journeys in compliance with the 10 regulations of both the company for which they work and the Federal Aviation Administration (FAA).