TEACHING TECHNICAL ENGLISH

- Target audience
- Sources
- Main principles
- Approaches
- Aspects of technical English
TARGET AUDIENCE

• Flight personnel:
  - pilots, navigators, radio operators;
  - flight engineers

• Ground personnel:
  - engineers, mechanics, load masters
SOURCES

• TechTalk (Elementary, Pre-Intermediate) by Vicki Hollett
• Technical English (Elementary, Pre-Intermediate) by David Bonamy
• English for aircraft by Philip Shawcross
• Standard Aircraft Handbook for Mechanics and Technicians by Larry Reithmaier
• The cockpit review
• Lufthansa training manual
• Boeing 747-400 Video Training Course
• Internet
MAIN PRINCIPLES

• Technical accuracy = safety
• Relevant content
• Learn by doing
• Think English
• Recycling
• Enthusiasm
APPROACHES

**FUNCTIONAL**

*Work-specific functions:*
giving instructions, 
making recommendations, 
suggesting solutions, etc.

*Technology-specific functions:*
describing cause, effect, action purpose, 
movement, quantity, prevention, etc.

*‘Survival’ English:*
ordering food, finding the way, 
asking for help, etc.

**COMMUNICATIVE**

*New language*

*Student-to-student interaction*
activities, games

*Thorough practice*
Positive group dynamic
ASPECTS OF TECHNICAL ENGLISH

VOCABULARY

Specialized technical terms
- fairlead
- grommet
- bellcrank
- bellows
- hydraulic transmission
- cam
- output
- solder
- general technical terms
- pump
- rotate
- pressure
- glinder

General vocabulary
- battery
- socket
- ladder
- safety
- test
- stop
- go
- plug
- email
- alarm
- telephone
- working

General technical terms
**Hold** the handle.

**Hold** the tool in place.

The cargo is loaded in the **hold**.

**Hold** push-back for 10 minutes.

- **Illustrations**
- **Lexical sets** (shapes, physical properties)
- **Word families** (vehicles - tug, tanker, loader, ambulance, etc.)
- **Common roots** (transmit, transmitter, transmission)
- **Sequences** (flight - push-back, taxiing, line-up, etc.)
- **Contraries** (push/pull)
- **Synonyms** (perform=carry out).
GENERAL CONDITION OF AIRCRAFT

PRESENTATION

Nose, windshield, passenger compartment, tail fin, nose gear, airbrakes, engine nacelle, leading edge, wing tip, rudder, spoilers, cargo compartment, undercarriage, flaps, ailerons, trailing edge, technical compartment, elevators, stabilizer, slats, flight deck, APU, luggage compartment, main legs, sliding window
ANSWERS

AIRCRAFT

WING
- leading edge
- airbrakes
- trailing edge
- wing tip
- flaps
- ailerons
- spoilers
- slats

POWER PLANT
- engine nacelle
- APU

TAIL UNIT
- tail fin
- rudder
- elevators
- stabilizer

LANDING GEAR
- nose gear
- undercarriage
- main legs

FUSELAGE
- nose
- windshield
- flight deck
- sliding window
- luggage compartment
- cargo compartment
- technical compartment
- passenger compartment
ASPECTS OF TECHNICAL ENGLISH

STRUCTURE

Basic minimum of information
Presented in context (listening/reading)

Basic aspects of English structure

Word order
Sentence structure

Complex structures frequently used in documentation

Conjunctions
Passive Voice
Flight level ≠ Level flight
Time check → Check time
Проверка времени
Ground proximity warning system test switch
WORD ORDER

PRACTICE

Back of a seat:

seat back/ back seat

Air from engine compressor:

air bleed/ bleed air

System that provides hot air:

air bleed/ bleed air
flap indicator position

flap position indicator

autopilot selector panel mode

autopilot mode selector panel

distribution cabin conditioned system air aft

aft cabin conditioned air distribution system
WORD ORDER

PRACTICE

Использование тяги

thrust use

Управление при помощи носовой опоры

nose wheel steering

Порядок аварийной эвакуации самолета

aircraft emergency evacuation procedure
BODY GEAR STEERING

Steering system for the nose gear and body gear provide airplane directional control during ground maneuvers and taxing. Body gear steering also reduces tire scrubbing when the airplane is turned with nose wheel angles greater than 20 degrees. As the nose gear turns in one direction, the body gear turns smaller proportional angles in the other direction.
ASPECTS OF TECHNICAL ENGLISH

RECEPTIVE SKILLS
READING/ LISTENING

• Listening or reading for content.
• Listening or reading for language.
• Further practice.
ASPECTS OF TECHNICAL ENGLISH

LISTENING

- complete a specification chart
- fill in a form
- label a spidergram
- arrange notes into the correct order
- physically carry out an instruction
- spoken instructions
- travel directions
- announcements
- emergency phone calls
- shouted warnings, etc.
  (non-native/native speaker accents)
DAMAGE PRESENTATION

Cracked windscreen
Dented roof
Broken window
Scratched door
Missing mirror
Flat tire
Bent bumper
Missing bonnet
Bent aerial
FAILURES & DAMAGE

PRACTICE
ASPECTS OF TECHNICAL ENGLISH

READING

• complete a specification chart
• fill in a form
• label a diagram
• correct factual mistakes
• answer questions

authentic sources:
• manuals
• technical articles
• user guides
• textbooks
• reports
• specification charts
ASPECTS OF TECHNICAL ENGLISH

PRODUCTIVE SKILLS SPEAKING

real-world situations:
- giving personal information
- giving instructions
- checking and reporting on progress
- reporting damage
- checking information
- giving technical support
- making recommendations
- giving warnings and directions

- information-gap activities
- problem-solving tasks
- short talks based on noted and diagrams (e.g. describe and compare devices and systems, explain how they work)
INSTRUCTIONS

PRESENTATION

Adjust
Decrease
Top up

регулировать
make smaller
fill, replenish

connect
tighten
fasten
raise
turn/switch on
extend
inflate
increase
lower
unfasten
loosen
turn/switch off
disconnect
decrease
retract
deflate
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<thead>
<tr>
<th>Press</th>
<th>Observe</th>
<th>Set</th>
<th>Release</th>
<th>Reset</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ___ the rotary selector to “A”</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. ___ the push-button</td>
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<tr>
<td>3. ___ the blue lights illuminates</td>
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<tr>
<td>4. ___ the push-button</td>
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</tr>
<tr>
<td>5. ___ the rotary selector to “NORM”</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depress</th>
<th>Check</th>
<th>Record</th>
<th>Ensure</th>
<th>Set</th>
<th>Monitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ___ covers are removed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. ___ oil level</td>
<td></td>
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<tr>
<td>3. ___ master switch to ON</td>
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<td>4. ___ START push-button</td>
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<td>5. ___ indications</td>
<td></td>
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<tr>
<td>6. ___ any anomalies</td>
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</tbody>
</table>
INSTRUCTIONS

PRACTICE

KNOB - rotate, turn, set, push, adjust

PUSH-BUTTON

CIRCUIT BREAKER

SEAT BELT

BRAKES

ESCAPE SLIDE

How do you...

• replace a light bulb?

• activate an escape slide?