

# Teaching Communication

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*English for Aviation*



MACMILLAN



emery-robotts

# Teaching Communication

- The ICAO requirements
- Examine misunderstanding
- Misunderstanding in authentic RT exchanges
- Communication strategies
- Teaching communication in *English for Aviation*
- Questions and answers

# ICAO Rating Scale

## Level 4 Comprehension:

Comprehension is mostly accurate on common, concrete, and work related topics when the accent or variety used is sufficiently intelligible for an international community of users. When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

## Level 4 Interactions:

Responses are usually immediate, appropriate, and informative. Initiates and maintains exchanges even when dealing with an unexpected turn of events. Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.

# ICAO Holistic Descriptors

Proficient speakers shall:

...use appropriate communicative strategies to exchange messages and to recognize and resolve misunderstandings (e.g. to *check, confirm, or clarify* information) in a general or work-related context...

What is...

checking?      confirming?      clarifying?

Is the altimeter setting 1014?

What's the altimeter setting?

Is the altimeter setting in  
inches of mercury or  
hectopascals?

Native speaking pilot to a native speaking controller



Native speaking pilots to a native speaking controller



Native speaking pilot to a non-native speaking controller



Non-native speaking pilot to a native speaking controller



Non-native speaking pilot to a native speaking controller





MacAir 0109



MacAir 557

Climbing flight level 240, MacAir 557

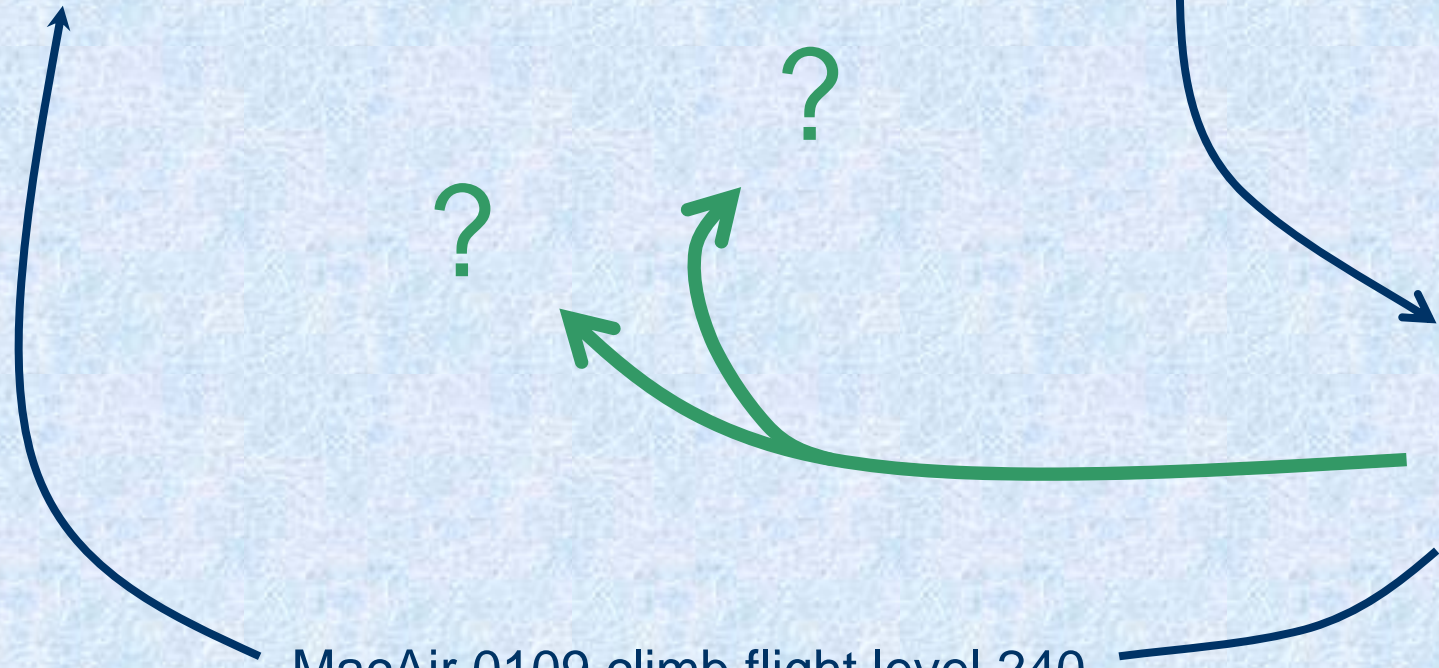


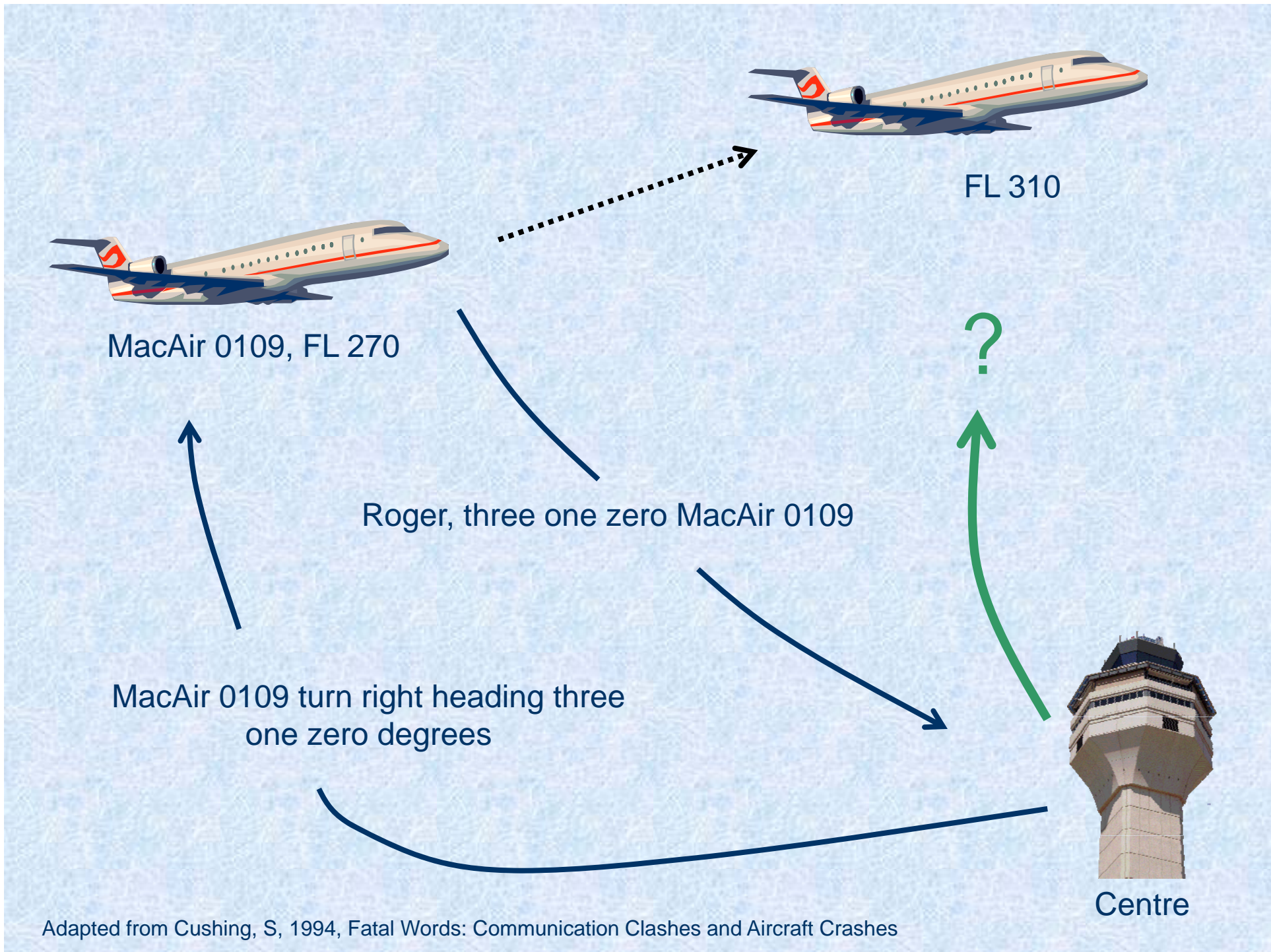
Centre

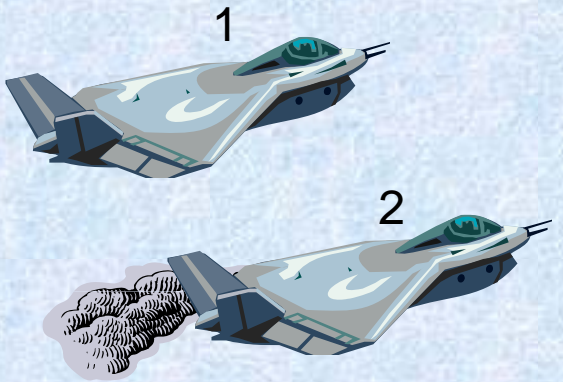
MacAir 0109 climb flight level 240

?

?







Lead pilot (2) responds with “we are in a left turn and we are climbing to 17,000”

Controller issues IFR clearance

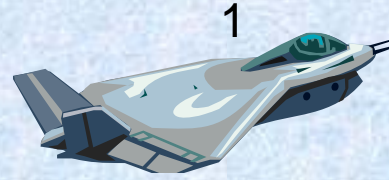
Lead pilot (2) reports engine problems and states “we need a clearance back to base”



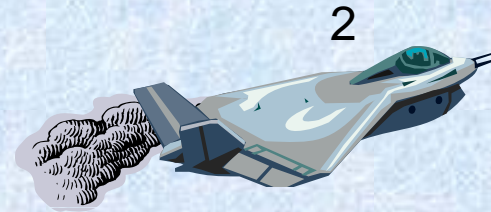
Centre



Centre



The wing man (1) “continues the original IFR clearance and completed the original route through the airspace of two centres”



The lead pilot (2) returns to base

“We have a Hawker stuck on runway 28 with mechanical problems. The runway is currently out of action. Maintain FL 170. Expect further clearance at 03”



Pilot



ATC

## The pilot:

- Received the transmission but didn't hear it
- Received only part of the transmission
- Understands
- Thinks he understands but is not 100% sure
- Thinks he understands but doesn't
- Knows he doesn't understand
- Knows he doesn't understand part of the transmission



Pilot

“MAYDAY MAYDAY MAYDAY Moller  
Centre MacAir 0109 we have  
intercepted MAYDAY from G-JFDE I  
say again G-JFDE, Cessna 172,  
engine failure forced landing 15 miles  
north of CAM VOR, 1000 feet  
descending, heading 120°, PPL, over



ATC

## The pilot:

- Thinks the ATC didn't receive the transmission
- Thinks the ATC received only part of the transmission
- Thinks the ATC understands
- Thinks the ATC understands but is not 100% sure
- Thinks he understands but doesn't
- Knows the ATC doesn't understand
- Knows the ATC doesn't understand part of the transmission

# COMMUNICATIVE FUNCTIONS IN LANGUAGE FOR AVIATION RADIOTELEPHONY

1. Triggering actions
2. Sharing information
3. Managing the pilot-controller relationship
4. Managing the dialogue

## 4. MANAGEMENT OF THE DIALOGUE

1. Name addressee(s)
2. Self-correct (C/P)
3. Paraphrase (C/P)
4. Close an exchange
5. Request response (C/P)
6. Check understanding (C/P)
7. Check certainty (C/P)
8. Correct a misunderstanding (C/P)
9. Read back (C/P)
10. Acknowledge (C/P)
11. Declare non-understanding (C/P)
12. Request repetition (C/P)
13. Request confirmation (C/P)
14. Request clarification (C/P)
15. Give confirmation (C/P)
16. Give disconfirmation (C/P)
17. Give clarification (C/P)

# Communication Strategies

*“The ways in which an individual speaker manages to compensate for [the] gap between what she wishes to communicate and her immediately available linguistic resources”* (Faucette, 2001)

# *Procedural vocabulary*

*“**Procedural vocabulary** is ‘core’ vocabulary with ‘procedural value’ to learners in that it provides them with a strategic resource to help overcome breakdowns in communication” (Marco, 1999; Robinson, 1989)*

- highly context-dependent
- contains very little lexical content
- plays a very important role in negotiating meaning of more specific technical words
- plays a very important role explaining concepts

# *Procedural vocabulary*

- not simply ‘knowledge of word meanings’
- use of such vocabulary in order to reach a communicative goal
- formulaic expressions often used in place of other words for definitions, paraphrasing, or explanations
- “establishing relations of simple synonymy or superordinacy” (Robinson, 1989, p. 530).

# *Procedural vocabulary*

## **Superordinacy:**

- A helicopter ***is a type of*** aircraft.

## **Synonym:**

- An Airbus ***is similar to*** a Boeing.
- To hurtle ***means to*** move very quickly and noisily.

# *To teach or not to teach?*

*“prior training of learners in specific questioning strategies can have an effect on their behavior in interactions and can influence their comprehension. Strategies used by higher proficiency listeners for specific tasks could be taught successfully to lower proficiency listeners” (Rost & Ross, 1991)*

*“often people use certain helpful listening strategies in their first language, but they fail to transfer those strategies over to their second language listening” (Mendelsohn, 1995)*

*“Finally, and most important, the learner should be taught not to give up” Hatch (1978)*

# *To teach or not to teach?*

*“Effective training in culturally appropriate CS use would be beneficial to students from all languages and cultures” (Faucette, 2001)*

*“The capacity of autonomy will be displayed both in the way the learner learns and in the way he or she transfers what has been learned to wider contexts”  
(Little, 1991)*

*“by learning how to use communication strategies appropriately, learners will be more able to bridge the gap between pedagogic and non-pedagogic communicative situations” (Færch and Kasper, 1983)*

# Reduction Strategies

## **Meaning replacement (or semantic avoidance)**

- P: We have a medical emergency. We'd like to land at the nearest available aerodrome with medical services.
- C: Understand you have problems with your aircraft.

## **Message abandonment**

uhh.. how to explain ... it's very difficult to say...

## **Topic avoidance**

- P: We have a medical emergency. We'd like to land at the nearest available aerodrome with medical services.
- C: Stand by.

# Achievement Strategies

- **Lexical substitution** the captain of the uhh... cabin
- **Generalization** we've got... uhh... the engine is not good
- **Exemplification** it's like smoke, but not water, like very hot water
- **Circumlocution** ...uhh...the yellow and white paint on the ground...
- **Word coinage** we needed a uhh... a carry bed? A carry bed for the sick passenger
- **Morphological creativity** there were not ... uhh... reparation facilities at the airport
- **Literal translation** The ... uhh... how you say?... for winds were broken?
- **Restructuring** It was too... uhh... it was not close for our position



# ENGLISH FOR **aviation**

For ICAO Level 4

For pilots and air traffic controllers

12 Units, three sections per unit:

- Reading
- Listening (plain English)
- Listening (non-routine R/T)



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# ENGLISH FOR aviation

**G:** Well today computers can fly both Boeing and Airbus planes from soon after take off through to landing. They use fly-by-wire technology.

**P:** Sorry Bob, I don't understand.

**G:** The pilot steers and maneuvers a fly-by-wire aircraft using electrical systems from the flight deck. But on conventional aircraft pilots have a mechanical link between the control columns and the control service of the aircraft. Computers and electric circuits replace all the linkages in a fly-by-wire system.

**P:** So if the A320 and 777 are both fly by wire what's the difference?

**G:** In the 777 pilots can override the computers and their built in limits. On the other hand, the A320 has built in protections.

**P:** What do you mean?

**G:** Airbus have built in safeguards. The computer doesn't allow pilots do any thing dangerous.

**P:** So on an Airbus the computer has the ultimate control and on the Boeing 777 the pilot decides.

**G:** That's correct.



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# ENGLISH FOR aviation

PNF: Mayday, Mayday, Mayday. Macair 246 we have a system failure, our lights are not working and our displays are down.

[Pause]

PNF: I don't think they're receiving us because the radio has lost its power.

PF: It appears everything has lost power! OK, Let's get the system going again.

PNF: The ECAM is on. It's too dark in here. Where's my flashlight?

PF: What do you mean?

PNF: My flashlight... uh... my torch. Here it is.



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# ENGLISH FOR aviation

- Ground 1: There he is.  
Pilot 1: Oh dear. The cage has moved across the floor.
- Ground 1: He's half way out. How did that happen?  
Ground 2: The thing that holds the door on to the cage is broken.
- Ground 1: What?  
Ground 2: You know. The thing that holds the door onto the cage. See? It's broken.
- Ground 1: The door hinge?  
Ground 2: Yes, the door hinge.
- Pilot 1: It looks like the cage fell over during the flight. It's on its side. That pallet of boxes has fallen over too..





# ENGLISH FOR aviation

PNF: I'd appreciate a PIREP from the company traffic two in front of us.  
Quickair six three eight.

TWR: Quickair six three eight. Roger. Stand by.  
[PAUSE]

TWR: Quickair six three eight, company seven three seven just exited  
the runway, sir; he said "smooth ride".

PF: Say again. Quickair six three eight.

TWR: Quickair six three eight, company seven three seven said  
"smooth ride".

PF: I don't understand the last thing you said. Quickair six three eight.

TWR: Quickair six three eight. The conditions for landing were smooth,  
uh... calm landing conditions for company traffic.

PF: Roger, calm landing conditions. Thank you. Quickair six three  
eight.





# ENGLISH FOR aviation

- C: Mike six four. Cleared low pass runway zero nine. Surface wind zero one zero at ten knots. Not below five hundred feet. QFE one zero zero six. Report final.
- P: Cleared low pass runway zero nine. Surface wind one niner zero at ten knots. Not below five hundred feet. QFE one zero zero six. Mike six four.
- C: Mike six four. The nose gear appears down but...
- P: I'm sorry. The nose wheel is in position? Is that right? Mike six four.
- C: No, that's not correct. The nose wheel appears down but it's at a niner zero degree angle. Mike six four.
- P: The nose gear is down but stuck at niner zero degrees. Mike six four.
- C: Mike six four. That's correct. On runway heading climb to altitude two thousand feet.



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# ENGLISH FOR aviation

P: Alpha three zero. Airborne.

C: Alpha three zero. It appears your main gear hasn't retracted.

P: Roger, my main gear has retracted. Thank you sir. Alpha three zero.

C: Alpha three zero. No, you haven't understood. Your main gear is not retracted. It is still visible.

P: OK. Our main gear is stuck... uh... OK Alpha three zero.

C: Alpha three zero. Say intentions.

P: Uh... We're trying to figure out the problem. stand by sir. Alpha three zero.

C: Alpha three zero. Standing by.





# ENGLISH FOR aviation

C: Sierra six two. State intentions?

P: We don't have much fuel. We're going to make a belly landing.  
Sierra six two.

C: Sierra six two. Use runway three four right. There is smooth ground on each side of the runway and you have a lot of space. Crash fire and rescue services have been activated.

P: Runway three four right. I have the field in sight sir. Sierra six two.

P: Tower, this is Fastair three five zero on three mile final. The apron is to the right of runway three four right. Do you mean three four left for the belly landing for traffic behind me?

C: Fastair three five zero. Affirm. Thank you. Break. Sierra six two. Use three four left. I say again, runway three four left.

P: Runway three four left. Sierra six two.



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# ENGLISH FOR **aviation**

FA: How long is it going to take to land?

P: It'll take about ten minutes.

FA: One passenger is very bad. We've got to get help soon otherwise he won't make it.

P: Sorry? Say again.

FA: If we don't get to a doctor soon, he will not survive.

P: We'll get him to a doctor in time. We'll have an ambulance waiting for us.

FA: OK, thanks.



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## References:

Færch, C., & Kasper, G. (1983a). Plans and strategies in foreign language communication. In C. Færch & G. Kasper (Eds.), *Strategies in interlanguage communication* (pp. 20-60). London: Longman.

Faucette, P. "A Pedagogical Perspective on Communication Strategies" *Second Language Studies*, 19(2), Spring 2001, pp. 1-40.

Cushing, S. (1997) *Fatal Words: Communication Clashes and Aircraft Crashes* University of Chicago

Hatch, E. (1978). Discourse analysis and second language acquisition. In E. Hatch (Ed.), *Second language acquisition* (pp. 401-435). Rowley, MA: Newbury House.

Larsen-Freeman, D., & Long, M. (Eds) (1991) *An introduction to second language acquisition research*. London: Longman.

Little, D. (1991). *Learner autonomy: Definitions, issues and problems*. Dublin: Authentik.

Marco, M. J. L. (1999) "Procedural vocabulary: Lexical signaling of conceptual relations in discourse" *Applied Linguistics*, 20, 1-21.

Mendelsohn, D. J. (1995). "Applying learning strategies in the second/foreign language listening comprehension lesson" D. Mendelsohn & J. Rubin (Eds.), *A guide for the teaching of second language listening*. San Diego, CA: Dominic Press.

Robinson, P. (1989). Procedural vocabulary and language learning. *Journal of Pragmatics*, 13, 523-546 .

Rost, M., & Ross, S. (1991) "Learner use of strategies in interaction: Typology and teachability" *Language Learning*, 41, (2), 235-273.

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