



# FATAL CONSEQUENCES OF MISCOMMUNICATION BETWEEN PILOTS AND AIR TRAFFIC CONTROLLERS

News / Airlines



**Communication failures have been blamed for more than a thousand deaths in plane crashes, warns an Australian academic who has reviewed the language pilots and air traffic controllers use.**

**Dominique Estival, a Western Sydney University linguist, pilot and flight instructor has urged native English speakers to adjust their communication in the aviation industry to reduce the risk of misunderstanding by non-English speaking pilots.**

Dr Estival said she has heard pilots in Australia saying "cleared for the big smoke" when cleared for takeoff, which was potentially dangerous in a situation where they were communicating with a non-English speaker.

So-called aviation English was adopted as the international language of pilots and air traffic controllers in 2011.

Miscommunication between pilots and air traffic controllers are cited as a key reason for many aviation accidents.

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Miscommunication between pilots and air traffic controllers are cited as a key reason for many aviation accidents. *Photo: AP*

But in her new book *Aviation English*, Dr Estival warns that some terms commonly used have been misunderstood, with fatal consequences.

Miscommunication had contributed to the deaths of more than 2000 people who have been killed in plane crashes since the mid-1970s.

Given that radio communication is the main means of communication between air traffic controllers and pilots, effective communication "is crucial for aviation safety".

"The study of aviation communication sheds light on our understanding of English, and differences between native English speakers and speakers of English as a second language in high risk situations," Dr Estival said. "Effective communication is paramount in ensuring the success of the

global aviation industry."

The aftermath of the collision between KLM and Pan Am 747s in the Canary Islands in 1977.

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The aftermath of the collision between KLM and Pan Am 747s in the Canary Islands in 1977.  
*Photo: AP*

In her book, Dr Estival said an investigation of a runway collision between two Boeing 747s in the Canary Islands in 1977 revealed the Dutch-speaking pilot's lack of English proficiency may have contributed to the accident.

The accident, involving a Pan Am jumbo and a KLM plane, claimed the lives of 583 people — making it the deadliest accident in aviation history.

A transcript of cockpit communication leading to the 1990 crash of Avianca flight 52 in New York revealed the pilot did not declare an emergency situation when he reported being low on fuel.

The plane crew reported "running out of fuel" instead of signalling an emergency situation with the words "Mayday" or "Pan Pan", another international distress signal.

"While in plain English, 'we're running out of fuel' may sound like a declaration of emergency, in the context of controller-pilot communications, where there is a specific prescribed phraseology for the declaration of an emergency, this statement would not be interpreted as such," Dr Estival said.

The statement could, and apparently was, interpreted as a mere concern and not an emergency situation. The plane crashed after running out of fuel.

Dr Estival said other examples included the incorrect use of the words "inbound" and "outbound", saying "no" instead of "negative" or "yes" instead of "affirm" and using terms for numbers such as "nina" for nine.

"Not knowing the right terminology, phraseology and using the exact words can be deadly important," she said.

#### **Plane crashes where poor communication may have contributed to disaster:**

- Tenerife Airport Disaster (1977): Dutch-speaking pilot's lack of English proficiency
- Avianca Flight 52 (1990): Did not declare an emergency when reporting it was running out of

fuel.

- Linate Airport Disaster (2001): Poor radio communication
- Dan Air Flight 1008 (1980): Pilot appears to have mistaken "inbound" for "outbound" and flew in the wrong direction.
- American Airlines Flight 965 (1995): An air traffic controller's lack of English proficiency

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