Radio telephony english in atc communication research paper

Engineering, Aviation

English is a standard language used for communication between air traffic controllers and pilots of international flights. There are two forms of using English language, Standard phraseology and plain language. Standard phraseology employs standard structure, terminology and pronunciation to promote efficiency and accuracy. On occasions when the standard phraseology is not efficient, plain language is used to deliver vital information.

Communication error has been cited has the biggest causal factor in both level bursts and runway incursions into Europe. This replicated in other parts of the world where aviation accident statistics have been documented. In a bid to standardize communication and between pilots and controllers, Commercial Aircraft Transport pilots and other pilots flying IFR within controlled airspace are required to abide by a commonly used reference radiotelephony guide to attain language uniformity and more understanding.

The use of a universal language in ATC communication is important because it ensures uniformity and understanding between the ATC personnel and aircraft pilots. This increases efficiency in communication between the air traffic control and pilots. It is apparent that communication is essential for safe landing and takeoff of airplanes. Without a standardized language for communication, there would be misunderstanding between the controllers and the pilots. Consequences of lack of proper communication can be detrimental.

It is due this fact that radio telephony tests have been developed for non-native English speakers. Pilots are required to take the test and demonstrate

their abilities to master standard ICAO phraseology and applicable regulations and procedures before they are issued with a certificate. There are authorized centers for administering these tests and can be taken in English, German, French, or Italian. However, a professional or airline pilot's license and equipment rating require the test to be taken in English.

Language deficiencies especially among non-native speakers of the English language have raised much concern in the aviation industry.

Air traffic controllers at Heathrow airport failed to understand a distress call from an Italian pilot in a Alitalia airliner carrying 104 passengers due to poor English pronunciation. According to a report detailing a near complete loss of the airliner's navigational equipment, the airliner lost touch in its final approach to London and two distress calls sent to the control room was not understood well.

The control tower failed to understand the may day message from the pilot and failed to institute usual emergency procedures including sending an alert to the airport fire station service and clearing the runway. The plane which flew from Milan landed safely but the misunderstanding prompted an unending debate on the quality of English spoken in cockpits.

According to the Accident Investigation Branch, Alitalia Airbus A320 left Milan with one of its navigation systems faulty. On reaching the final approach to Heathrow, the second navigation system failed and the landing was aborted. Using the last circle, the pilot sounded an emergency message known as " Pan-pan" call and reported the failure. The air traffic controllers did not understand until another aircraft intervened and the pilot landed manually

on a " point and shoot" basis transmitting a more serious mayday call asking for priority. The investigation reported that the mayday element of the call was not heard by the controller due to a combination of poor English pronunciation and lack of protocol in announcing the expected protocol.

IN another incident, a Russian pilot flying an Indian airline misunderstood the ATC English instructions and crossed the path of another airline nearly sparking off a mid air collision over Mumbai. According to an official from the airport, such cases are rampant especially among foreign pilots hired by Indian airlines.

The incident prompted the Directorate General of Civil Aviation (DGCA) to initiate an English language proficiency test among pilots and ATC personnel. They also acted on a directive by ICAO for officials to seek additional training for pilots and ATC personnel before March 2008 because much of the safety reports showed the inefficiency in English communication between pilots and ATC staff. According to a report from Indian airline and transport industry, the influx of pilots from Russia, South American countries, Korea, and Armenia are finding it difficult to communicate effectively in English. The just is not the only problem, but also the accent is inappropriate. " The problem is that it takes longer to respond to foreign pilots with their incomprehensible accent resulting in traffic jams and near-misses" one official noted.

The same problem is reported with localized English accents of Indian. In most instances foreign pilots are accompanied with locals but the decisions are solely made by the pilot imparting serious problems when English communication is not effective. English language effectiveness forms part of the training in a pilot's career and must be taken seriously.

Noting that communication error is a leading cause of accidents apart from technical components, ICAO has come up with guidelines that help commercial aircraft pilots and other pilots flying within controlled airspace to communicate effectively. The need for clear and unambiguous communication between ATC controllers and pilots is essential for safety reasons. It is crucial that the use of standard words and phrases have been employed to ensure that pilots and ATC maintain highest professional standards while using RTF. This is important when operating in busy and congested frequencies where a fraction of a second wasted with verbosity and non-standard, ambiguous phrases could result in flight safety incidents. ICAO has developed standard phraseology over time that provides maximum clarity and brevity in communication and ensures that the phrases are unambiguous. While standard phraseology is not applicable in all situations, knowledge of Standard English will aid communication when plain language is essential. The terms are applicable to clearance and taxi, take- off and departure, read-back, climb, cruise and descent, approach and landing, and emergency communications.

Language proficiency tests are conducted for pilots who need to improve their plain English in radiotelephone communication to meet to requirements of ICAO. The exam will contain both books-based and online learning materials for flexible learning. Usually the whole course takes 125 hours of learning materials spread across two components namely; workbook and online CBT packages. The course integrates interactive approaches to learning where activities based on a variety of grounds and in-flight situations are inferred to. The main focus on mastering listening and

speaking skills required for routine and non-routine communications using aviation phraseology as well as plain English. After the completion of the training and demonstrated ability to master the standard ICAO phraseology, a certificate of proficiency in flight training module is awarded.

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