



# THE ANALYSIS OF THE NEEDS OF AVIATION TRAINING PROGRAMS STUDENTS REGARDING LEARNING AND/OR IMPROVING THEIR ENGLISH

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DOI: 10.55535/RMT.2022.2.09

*The paper highlights the vital role the English language plays in the aviation industry. Its purpose is to explain the connection between the military specialties and branches that can be chosen by the students who pursue a career in aviation, and the ability to speak, write and understand English. The correlation between these two aspects is further sustained by the analysis of the all-time deadliest air disaster – Tenerife, whose major contributing factor was the communication error based on the English language.*

*Keywords: aviation; safety; aircraft; communication; lingua franca;*

## INTRODUCTION

Have you ever wondered why English is so important nowadays? I bet you probably have a part of the answer. As it can easily be seen, in the 21<sup>st</sup> century, having the ability to speak a different language than yours is a must. Nowadays, it is mandatory for everybody to be able to know at least one international language. It really seems like knowing the English language is not something new, since almost everybody is capable of speaking it these days. And why is that? Why is it so common to speak English everywhere? Well, the answer is pretty simple and it concentrates in the meaning of the word ‘communication’. What would the world be without communication? It has been known since ages that the communication is the key for everything. So it is when it comes to Aviation. How would all the entities that are involved in ensuring the flight by all means communicate if they did not have a common language to understand?

## AVIATION ENGLISH AS LINGUA FRANCA

Why did English become the international language? English is the *de facto* global *lingua franca*. It is the language of world trade, the main language in international diplomacy, the language of air traffic controllers, pilots and most academic journals. Furthermore, English is the most common language on the internet, and it is the language that international travelers with different native language use to communicate (the very definition of a *lingua franca*).

English as a *lingua franca* (ELF) is the use of the English language “as a global means of inter-community communication” (Kumiko, 2017). In its most simple definition, ELF is the use of English between speakers who do not use it as their native language, so it serves as a connection or contact language for intercultural communication. I should also stress that this actually includes native speakers of English as well but, of course, they are not the majority of ELF users.

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On the other hand, there are notable distinctions between English as *lingua franca* and Aviation English (AE), which combines ELF and a variety of English derivatives/dialects. ELF is a much broader construct, which covers many more contexts, situations and speakers than Aviation English and is not a stable variety (Estival, Farris, Molesworth, 2018).

What makes Aviation English different from other varieties of English?

- Beside its primary focus – to facilitate communication between air traffic controllers and pilots – AE is used among the crew members in and beyond the cockpit, on the ground and among aircraft and airport maintenance staff;
- It is heavily regulated by law via the national Aeronautical Information Publication (AIP), the Military Aeronautical Information Publication (MIL AIP), International Civil Aviation Organization (ICAO) or internally, through various organisations. These regulations and policies constrain the language and all those who use it;
- AE has no native speakers, therefore it is a variety that must be learned even by native English speakers;
- Furthermore, like other derivatives of the language for specific purposes, it is a restricted domain used only for the specific purpose of communication in the aviation environment (Moder, Halleck, 2009).

## ENGLISH –THE LANGUAGE OF THE SKIES

### *The Importance of the English Language in Aviation*

Throughout time, it has been established that the communication itself has a key contribution to gaining success. Here are some of the features communication has in promoting a security climate and improving the aviation processes:

- imposing an effective leadership;
- developing the management process;
- laying the foundation for the decision-making process;
- setting the basis for coordination and cooperation;
- promoting dialogue, cooperation and peace.

Identified as a major factor of the air crashes, communication seems to be essential for organisational and management performance,

especially in aviation industry. Its core task in the field of aviation is to ensure safety. This is the fundamental reason why the English language was adopted as standard for aviation in 1944. So, in order to ensure safety through effective communication, the aviation personnel must be able to speak, write and understand English. Being viewed as a basic purpose of communication, safety in this case depends on several factors. In *figure no. 1*, there are included the characteristics of the communication in English language that must be taken into account when it comes to safety. As one can see, fluency in English, effectiveness, the speed of sending clear messages and the correct spelling are fundamental in aviation for ensuring a safety climate, which would eventually result in avoiding accidents based on miscommunication, as such accidents unfortunately happened quite often throughout history. All these traits will be further explained in the chapter that addresses *air communication*.

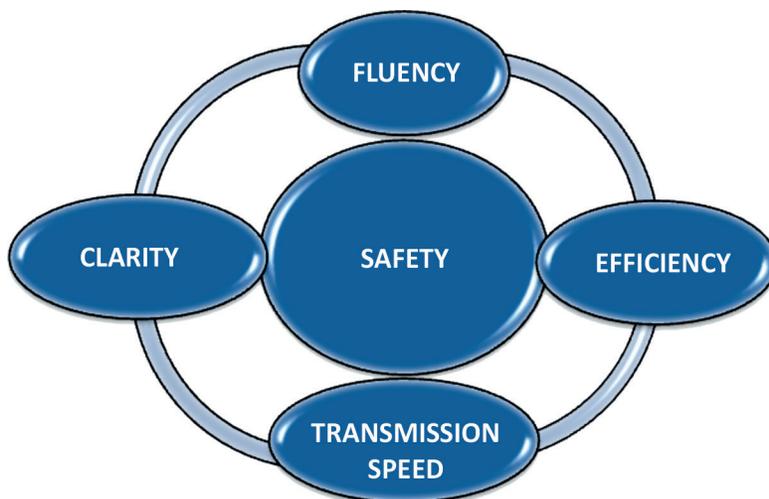


Figure no. 1: main features of spoken English in Aviation

*Fluency in English, effectiveness, the speed of sending clear messages and the correct spelling are fundamental in aviation for ensuring a safety climate, which would eventually result in avoiding accidents based on miscommunication.*

We cannot speak about air communication if we do not address concepts like *information (message)* and *redundancy*. Addressing the first topic, information in aviation represents *“the faithful, objective reflection of reality regardless of the interpreter and it becomes relevant only after it has been perceived as a phenomenon of knowledge, only after it was agreed by the subjective interpreter, received and decoded”* (Lesenciuc-1, 2017, pp. 25-26).



*Redundancy is a concept close to information, which refers to what is predictable in a message. In other words, a highly predictable message is redundant and, at the opposite side of this spectrum, a message with a low level of predictability becomes informative.*

Regarding redundancy, the term was first used by Harry Nyquist in 1920 as a reference to the component of the “*useless*” sinusoidal signal that does not send any information. In this respect, redundancy is a concept close to information, which refers to what is predictable in a message. In other words, a highly predictable message is redundant and, at the opposite side of this spectrum, a message with a low level of predictability becomes informative. Those being said, it is very clear that *effective communication* is mandatory in the aviation operational context. Communication is made effective by the following elements: (1) Precise message; (2) Complete message; (3) Correct message; (4) Clear message; (5) Reliability; (6) Consideration of the Recipient (Anjali, 2018).

English was chosen “*the language of the skies*” at the *Chicago Convention*, in 1944.

### ICAO

The convention for International Civil Aviation, signed in 1944, was adopted in order to promote cooperation and to “*create and preserve friendship and understanding among the nations and peoples of the world*” (Ibid.). This agreement, or the *Chicago Convention*, as it is mostly known nowadays, established “*the core principles permitting international transport by air, and led to the creation of the specialised agency which has helped states to cooperate together it ever since – the International Civil Aviation Organization (ICAO, 2021)*”.

In its mission, ICAO established a series of strategic objectives (S.O.) that are exposed in *figure no. 2*.

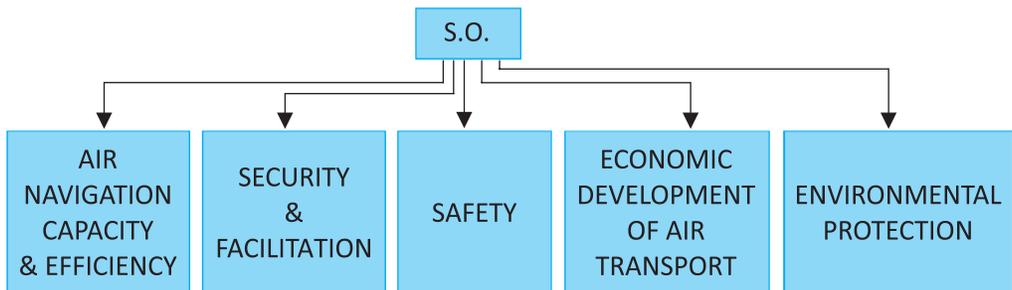


Figure no. 2: ICAO strategic objectives

### Aviation-English Language Interdependence Relationship

As mentioned above, the aviation industry could not survive without a common language that could be spoken and understood by everyone engaged in the mission. Since the core task of aviation is to provide safety, sharing a standard phraseology is essential. How could the General Air Traffic and the Operational Air Traffic be phased if there was no mutual vision? Not to mention that the military personnel are required to learn and become proficient in English, considering our country membership of the Alliance.

Together with the English language being established as the international language accepted in aviation, all the facilities, departments and personnel involved in the flight activity use it in order to accomplish their missions. In order to consider an aeronautical activity as successful, the entities involved must perform their professional work at a high level. Such an effect is possible only through well-trained personnel who meet the requirements of their jobs. Being able to speak, write and understand English is one of them. In *figure no. 3*, the relationship between some of the structures involved in the flight activity is outlined, an activity whose efficiency cannot be possible unless a common language is used.

Since it has been established that the main reason why English must be learnt by aviation personnel is to provide safety, the paper further summarises other arguments that support this hypothesis, and which will be further-developed in Chapter 3.



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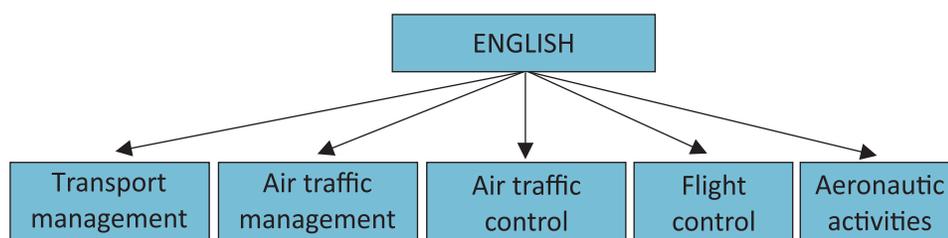


Figure no. 3: The use of English in several departments of the aviation industry

Air Force is a branch of the complex Armed Forces domain and, since the armed forces are characterised by uniformity and similarity, *standardisation* has been an absolutely necessary feature. For this purpose, a standard military phraseology has been established in English, aimed at assisting all Alliance members in aligning with the same



vision. The effect of such a standardisation proactively contributes to the development of healthy and prosperous relationships among the military personnel. In this context, learning and acquiring proficiency in English is required because of the following:

- the need for standardisation – air communication – safety;
- the everyday life in international military bases;
- International missions;
- alignment with NATO requirements.

## THE NEED OF AVIATION PROGRAMS STUDENTS FOR LEARNING ENGLISH

### *Standardisation*

When it comes to leading the flight activity until the end, all the branches that military students wanted to pursue are involved. Each department has its own duties and tasks that must be successfully met in order to ensure a safe flight. But these tasks, no matter the specialisation, all lead to the same final purpose. Even if they are so different in terms of meaning and activities, setting a standard phraseology among the aviation personnel made things much easier.

Thus, the ability to speak, write and understand English is compulsory in order to learn and use aviation meteorology, navigation, maps, electronics and avionics, air traffic control regulations etc. Therefore, any branch chosen by a student in the military aviation career requires a high-level of English understanding:

- Pilots;
- Air Traffic Controllers (ATC);
- Weather officers;
- Staff officers;
- Electronic warfare (EW);
- Anti-Aircraft Artillery.

Considering the large number of air disasters that occurred because of the miscommunication, this paper focuses on the radio communication between pilots and air traffic controllers related to the use of English language.

According to ICAO, it is required that the pilots and ATCs show comprehensible pronunciation, clarity in expression, fluency and

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delivery of message, together with the capacity to paraphrase in unexpected situations. As ICAO states, “*comprehension is mostly accurate on common, concrete, and work-related topics*” but “*with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies*” (Academia.edu, 2021). Regarding the interaction and exchange of information, they have to be capable of providing immediate, suitable and short responses. Dealing with the “*unexpected turn of events*” is mandatory as well and they must check, confirm or clarify all these aspects.

Because the process of communication between the air traffic bodies and pilots happens only over radio frequencies, the importance of sending clear information is vital. However, ATCs and pilots use similar charts and flight plans, and the radar display during the entire flight has a huge significance. Providing a real and accurate image of the radar display is one of the tasks of the personnel involved in the specialty *Electronic Warfare in Aviation*.

The entire communication within and from the pilot’s cockpit involves information regarding: the area over which the aircraft flies, altitudes, headings, weather parameters, particular points of navigation etc. The specific language, the set vocabulary and syntax are known as “*phraseology*”, as mentioned above. When necessary, there were multiple situations, especially the emergency ones, when “*plain English*” was used, described as a non-standard use of standard vocabulary and syntax.

In terms of standardisation, the “*ICAO Alphabet*” was also established, so commonly used among the military. There are some particular aspects in this regulation and they refer to the pronunciation. In order not to be confused, the following rules have been agreed:

- the pronunciation of number 3 is “*tree*”;
- the pronunciation of number 4 is “*fauer*”;
- the pronunciation of number 5 is “*fife*”;
- the pronunciation of number 9 is “*niner*”.

Also, the standard pronunciation of the letters from the alphabet used in radiotelephony is showed in *table no. 1*.

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Table no. 1 – ICAO Alphabet (ICAO, lb.)

|             |             |              |             |            |
|-------------|-------------|--------------|-------------|------------|
| A - Alpha   | G – Golf    | M - Mike     | S - Sierra  | Y - Yankee |
| B - Bravo   | H – Hotel   | N - November | T - Tango   | Z - Zulu   |
| C - Charlie | I – India   | O - Oscar    | U - Uniform |            |
| D - Delta   | J – Juliett | P - Papa     | V - Victor  |            |
| E - Echo    | K – Kilo    | Q - Quebec   | W - Whiskey |            |
| F - Foxtrot | L – Lima    | R - Romeo    | X – X-ray   |            |

In the operational dialogue between the air traffic controller and the pilot there are no language barriers – the phraseology is explicit, denotative, does not cause confusion or environmental barriers of a psychosocial nature. *“The only type of barrier that can occur during the communication loop is determined by the technical environment due to background noise in relation with the signal strength.”* (Lesenciuc-2, pp. 16-19)

*Most verb forms are used in the imperative and a relatively small number of prepositions is employed. The vocabulary is standard and particular. Moreover, the letters and numbers are pronounced according to the ICAO Alphabet.*

In order to identify some distinct aspects of the English language used in radiotelephony, it was exposed and example of a routine communication that takes place between the pilot and the en route controller (CRC).

*“PLF059: Reporting Center Control, Papa Lima Foxtrot zero-fife-niner at tree-fife-zero.*

*CRC: Papa Lima Foxtrot zero-fife-niner, Reporting Center Control, roger, maintain flight level tree-fife-zero, report at Kampa.*

*PLF059: Report at Kampa, Papa Lima Foxtrot zero-fife-niner.”*

Taking into account this example, one can easily see that the exchanges are short and the grammar forms are limited. Most verb forms are used in the imperative and a relatively small number of prepositions is employed. The vocabulary is standard and particular. Moreover, the letters and numbers are pronounced according to the ICAO Alphabet. Some studies reveal that in radiotelephony, verbs most frequently occur in the imperative, with some verbs commonly occurring in the -ed or -ing participle forms. The most common prepositions are *to, of, at, and on*, prepositions typically associated with establishing locations, directions, or goals (Academia.edu).

In the example above it is showed the correct order of the call-signs used in air traffic communication. The pilot is the first to state the entity he wants to speak with, the CRC, and after that he states his call sign PLF059, at the very beginning of the conversation.



This order has a major importance, first to identify the addressee and after to identify himself as a speaker, because all aircraft in the air are connected to the same frequency. The use of a common language and frequency is critical for safety, since it ensures that all aircraft and control personnel have early and situational awareness of the aircraft, their intentions and positions. When an exchange is initiated, it is essential that the speaker and the addressee are clearly identified. (Ib.)

The standard term “*roger*” was used by the ATC after receiving, understanding and confirming the information regarding the flight level of the aircraft (FL350, meaning flight level 3,500 feet). After that, the controller provides the instructions “*maintain flight level tree-five-zero*” and requires the pilot to notify him again when he actually arrives to the mentioned point identified as *Kampa*. Repeating the information “*Report at Kampa*” is essential and is called ‘readback’, whose purpose is to make sure the delivered information was correctly understood.

On the other hand, the next examples show radio conversations that do not follow standard phraseology, a situation that unfortunately lead to multiple air crashes.

*“A 915: Mayday, mayday, mayday, uh this is uh Airline nine-one-five, hit birds, we’ve lost thrust both engines, we’re turning back towards airport.*

*C: okay uh, you need to return to airport? turn left heading of uh two-two-zero.” (Ib.)*

This situation highlights the use of plain English, even if there is a standard phraseology for emergency situations such as this one (“*bird strike*”). Moreover, the pilot uses full English syntax, even pronouns and auxiliary forms. The use of “*okay*” is not accepted neither, since the standard term for confirmation is “*roger*”.

*“MS126: Reporting Center Control, Mike Sierra one-two-six, I’m deviating a bit right for weather.*

*CRC: Mike Sierra one-two-six, Reporting Center Control, right deviation approved.*

*MS126: Roger.”*

This example shows the use of plain English by the pilot, which, in some cases, could be difficult, especially if the pilot is native speaker and the other one is not, like in this case. Even if there is standard phraseology meant to be used in cases like that (*Request weather deviation*) (Ib.), the pilot chose to use contracted forms of the present

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continuous tense, together with a vocabulary that does not exist in standard phraseology.

Similar facts are also established for weather officers, in terms of standardisation. A standard phraseology is used in this field as well, in order to be understood by all users, either the pilot or the ATC. Since the weather plays a critical role in safety, a common language was set up. Some examples of the standard phrases are shown in *table no. 2*:

In order to assess cloudiness in the sky, oktas are used, with the following scales:

*Table no. 2: Standard abbreviation used in Meteorology (FA 6.1)*

| <b>Cloudiness</b>       | <b>Oktas</b> | <b>Standard abbreviation</b> |
|-------------------------|--------------|------------------------------|
| Sky Clear               | 0/8          | SKC                          |
| Partially covered       | 2/8          | FEW                          |
| Variable (Scattered)    | 3-4/8        | SCT                          |
| Cloudy (Broken)         | 5-7/8        | BKN                          |
| Full covered (Overcast) | 8/8          | OVC                          |

### **Life on Base/International Missions**

No matter the country in which one performs their mission, one must share a common language. As this paper has already showed that the English language has been established as language of international use, the military deployed in other countries must be able to communicate effectively. Thus, the English language enables aviation personnel from different countries to communicate quickly and deliver and receive the needed piece of information fluently.

When going abroad, for military purpose, the first thing one has to consider is to survive. How is that possible? With the help of language, of course. Before starting the assigned mission and accomplishing the tasks, they must provide to themselves the basic needs from Maslow's pyramid. The personnel involved in such missions must know at least the basic vocabulary, related to the life on base. One must be able to express their requirements. Finding a house with appropriate standards for one's needs, asking for types of food according to the culture one is part of, changing tickets that are not suitable with one's requirements, asking for help when in need, all these sorts of inevitable situations of communication require the ability to speak and understand English. This is one of the reasons aviation officers

must to take a standard English exam every four years of their career (NATO STANAG 6001) in order for them to be promoted in a higher rank and to meet the requirements of their positions. Furthermore, when applying for a mission abroad, if one does not have the level of English required, the STANAG exam must be repeated and until one does not reach the adequate level of proficiency in speaking, writing, listening and reading in English, one will not be allowed to apply for that position, no matter one's rank or experience.

The importance of the English language is highlighted not only regarding the life on base, but also in terms of international missions. In these times, characterised by the increasing interconnection between human beings and organisations, both locally and globally, the English language has become the language of communication when it comes to the international professional field and research. *“Not surprisingly, English also stands as the vehicular language for the military, in an international geo-political scenario marked by the globalization of conflicts beyond national borders and consequently by the integration of armies in multinational and multicultural coalition forces”* (Concepcion, 2013). If we take a look at the conflicts in Iraq and Afghanistan, one fact that may be identified is the strategic significance of the ability to manage the information and to send the right message – *“Knowledge is power”* (F. Bacon). Thus, it looks like military success and efficacy depend on effective communication between those involved in the communication process. Especially nowadays, when the world is dealing with a new form of war – the hybrid one, which almost replaced the traditional one, the media may be used as a political instrument and may also be recognised as a *“weapon of mass communication”* (Ib.).



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### **Aligning with NATO Requirements**

According to NATO, standardisation means *“the development and implementation of concepts, doctrines and procedures to achieve and maintain the required levels of compatibility, interchangeability or commonality needed to achieve interoperability”* (NATO Standardisation, 2017).

In order to fulfill the tactical, operational and strategic objectives of the Alliance (Ib.), one of the most important contributing factors is the ability to work together. Coherence, effectiveness and efficiency



are some of the main characteristics that lead to success. To make that possible, it is necessary for all the partners to share a mutual set of regulations and values. One example of such regulation would be the above-mentioned STANAG, which turned the ability to understand English into an essential competence for the professional military career. Those being said, the role of the English language, seen as international language in the military context, is absolutely understood, since NATO promotes dialogue and cooperation between multinational structures in a multi-lingual context.

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## **CASE STUDY – THE ANALYSIS OF TENERIFE AIR DISASTER DUE TO MISCOMMUNICATION BECAUSE OF LACK OF ENGLISH PROFICIENCY**

### **Background**

On 27 March, two Boeing 747 were set to fly to Gran Canaria. One of the aircraft belonged to Pan Am, the other one to KLM. Both airplanes were fully booked, as the ones from Pan Am 1736 were going on a cruise and the ones from KLM 4805 were going on vacation. During their flight to destination, the airport Las Palmas was closed for security reasons, as some terrorists had detonated a bomb in Gran Canaria. Due to this fact, both flights were redirected to Tenerife Airport.

### **Course of events**

Because the Las Palmas airport was closed for multiple hours, both aircraft had to wait at Los Rodeos airport (Tenerife), until the one from Gran Canaria would reopen. Meanwhile, the captain of the KLM crew decided to refuel the aircraft, which would prove to be one of the major contributing factors for the disaster that was about to happen.

During the time the KLM was refueling, the Las Palmas airport reopened and was safe for new arrivals. The Pan Am was waiting behind the KLM, which was about to complete the refueling and then take-off. The weather was still sunny at that time, but as time passed, some low-altitude clouds began to cross the airport area and soon turned in fog. By the time KLM finished refueling, the thick fog had already covered the airport.

After refueling, the KLM asked for start clearance. Since KLM was starting their engines, Pan Am asked for start clearance as well. KLM was approved to taxi and hold on Runway 12. After switching

to approach frequency, they requested backtracking on Runway 12 in order to take-off on Runway 30. “The approach controller cleared KLM to taxi on the runway but to exit at the third taxiway on the left and proceed to the holding position for Runway 30. KLM read this back as exiting by the first taxiway. The approach controller then amended his clearance, directing them **to taxi straight down the runway and make a backtrack**” (Aircraft Accident Report).

Having their clearance to backtrack, they continue without exiting any taxiway. At the same time, the Pan Am started the engines and were ready for taxiing, as they received the clearance. They received instructions from the ground controller “to leave the runway at the third taxiway on their left” (Ib.). Because of the Spanish accent of the controller, the instructions provided in poor English were difficult to understand. After changing to approach frequency, they were given the same information, being cleared to taxi on the runway. Figure no. 4 shows the transition to C – 3.

As the Pan Am was turning onto the runway, visibility was decreasing rapidly because of the dense fog, and its value was estimated at less than 100 meters (Ib.).

*Because of the Spanish accent of the controller, the instructions provided in poor English were difficult to understand. After changing to Approach frequency, they were given the same information, being cleared to taxi on the runway.*

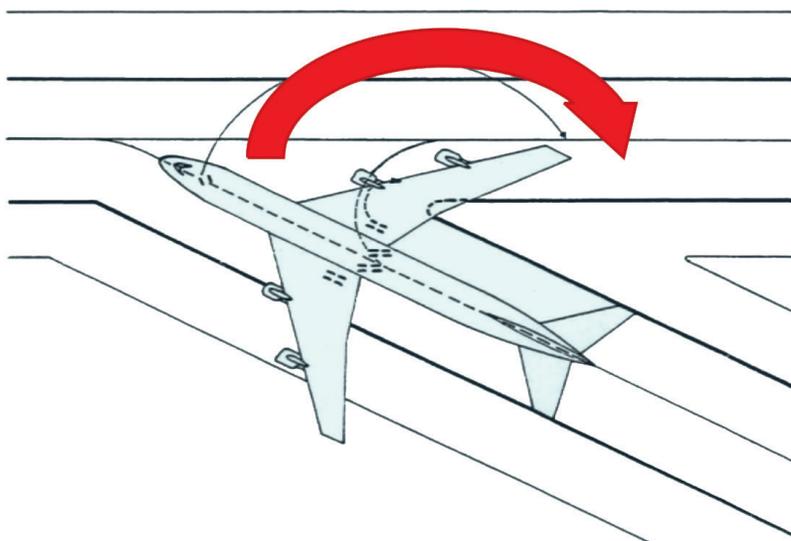
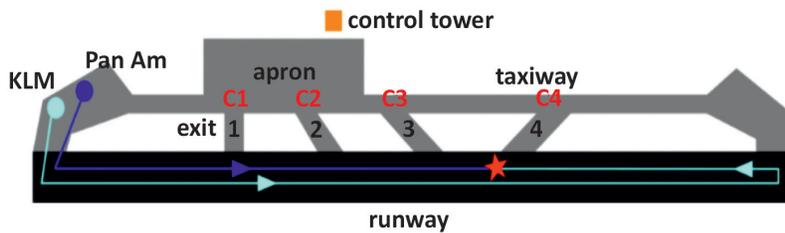


Figure no. 4: The transition to C-3  
(adapted after <http://archives.pr.erau.edu/ref/Tenerife-ALPAandAFIP.pdf>,  
retrieved on 6 September 2021)



When asked of their position, the KLM crew said that they *though* they passed C-4. After acknowledging their position, the controller instructed them to make a 180 degree turn at the end of the runway and to call back. *Figure no. 5* shows the runway, the taxiway and the exits named according to the ICAO alphabet (Charlie –1, Charlie –2, Charlie –3, Charlie –4).



*Figure no. 5: Illustration of the Los Rodeos airport*  
(adapted after <https://simpleflying.com/tenerife-disaster/>, retrieved on 6 September 2021)

KLM completed the 180 degrees turn and lined up to the runway. After that, it received the clearance from the controller that stated as follows: “KLM eight seven zero five you are cleared to the Papa beacon, climb to and maintain flight level niner zero. Right turn after takeoff, proceed with heading zero four zero until intercepting the three two five radial from Las Palmas VOR.” (Ib.). The readback of the pilot, as the transcript of the records said, was “**We are now – uh – takin’ off**” or “**We are now at takeoff**” (Ib.). After receiving this message, the controller answered: “**Okay (pause) stand by for takeoff, I will call you**”. (Ib.)

When hearing the phrase “we are now at take-off” together with the controller’s answer “okay (pause)”, the Pan Am sent the following message: “and we’re still taxiing down the runway – the Clipper 1736”. (Ib.) Because both aircraft and the controller shared the same frequency, the KLM crew could not hear the message that followed the pause after the previous “okay”, so they took it as an approval, not hearing the rest of the instruction “stand-by for take-off”. Continuing to accelerate for take-off, a few seconds later, they saw the lights of the Pan Am which was taxiing on the runway. The impact could not be avoided, and the collision was fatal. *Figure no. 6* shows the collision.

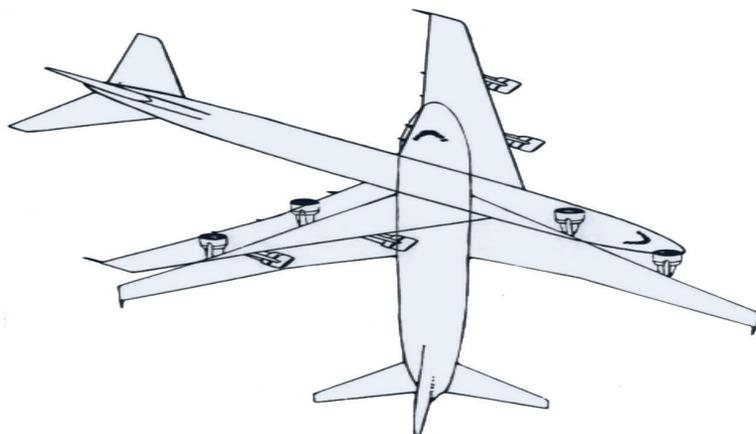


Figure no. 6: The crash of the two aircrafts involved (lb.)

### ***The Analysis of Miscommunication based on the English Language as a Contributing Factor to the Disaster***

As it is already known, the ATC is seen as “*the eye of the pilot*”. Those being said, the safety of the flight, the lives of many passengers and crew depend on the instructions provided by the controller. Thus, the information sent must be correct and clear, transmitted fluently, effectively and accurate, as shown above in the present paper. Any kind of ambiguity in sending the message could lead to critical situations, as it is the one above-mentioned, starting with the distorted voice of the controller, barely understandable, due to the heavily Spanish accent, together with the lack of trust in the instructions he provided, amending his clearance and making a pause between instructions that turned to be fatal and ending with the absolutely avoidance of the use of standard phraseology established, using the plain English instead, as explained earlier. The different between a native speaker and a non-native speaker of English appeared to be critical.

After listening to the records, multiple times after the accident, it still could not be established the exact meaning of the phrase that KLM said: “*We are now at takeoff*” or “*We are now – uh – takin’ off*”, neither one of them using the correct phraseology. The use of syntax, prepositions and interjection is a clear sign of using plain English. The ambiguity started from then on, and the controller thought that KLM was at take-off position, not that they were really taking off.

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One of the major mistakes was confirming with the word “okay” as a readback to KLM. Not to mention that the word “okay” is not used in the standard phraseology, while the pause between “okay” and the rest of the instruction created the biggest ambiguity ever. That because KLM only heard the word “okay”, as Pan Am was interfering with the same frequency and announced that they were on the runway as well, when hearing that KLM is at take-off. Due to the fact that both the Pan Am and the controller who was giving instructions to the KLM to hold were talking at the same time, the KLM did not hear the rest of the message, only the word “okay”, which was considered as a clearance for taking-off.

Moreover, the controller identified KLM 4805 as KLM 8705 several times, demonstrating lack of concentration, and identified Pan Am for the first and single time as “Papa Alpha”, instead of “Clipper” as usual, which was crucial for the event. Again, the disobedience of rules and regulations established for the aeronautical communications led to one of the world’s deadliest air crashes ever.

*Thus, learning and developing the English language must be a core task for the students that are trained in the Aviation program within the “Henri Coandă” Air Force Academy. Reaching the optimum level of English proficiency has to be seen in connection with academic success and professional development.*

## CONCLUSIONS

As communication is a key-factor in aviation safety, the particular interest in adopting a standard language for all the personnel involved in the aviation industry is fully understood. The main concern regarding military communication is not only related to international security but also to the critical consequences generated by miscommunication based on the lack of English knowledge. Thus, the ability to understand, speak, write and read in English became an essential professional aptitude that was materialised in the absolutely necessary requirement of acquiring and maintain the English level certified by STANAG. Thus, learning and developing the English language must be a core task for the students that are trained in the Aviation program within the “Henri Coandă” Air Force Academy. Reaching the optimum level of English proficiency has to be seen in connection with academic success and professional development. In order to be able to perform any duty in aviation, the knowledge of English language is mandatory, otherwise the personnel would be unable to accomplish any task assigned. As seen in the analysed air crash, the language difficulties, the ineffective communication and the poor usage of English led to the greatest air disaster in history.

To conclude, we believe that the use of standard phrasing and terminology, as well as the conversation with minimum English accent and a high level of fluency and accuracy are compulsory in order to ensure a safe aeronautical activity.



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