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The Effect of Formulaic Language on ESP Learners'
Conversation Competence: The Case of Aviation
Professionals in Algeria

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Doctorate in English Language and Education

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"**The Effect of Formulaic Language on ESP Learners' Conversation Competence: The Case of Aviation Professionals in Algeria**"

Is original work performed by me under the guidance and advice of my faculty advisor, Dr Radia **BENYELLES**. I have read and do understand Abu Bakr Belkaid University-Tlemcen Policy on Technical Writing and Plagiarism. By signing this statement, I unequivocally assert that the aforementioned thesis conforms to both content and format regulations.

The work contained in this thesis had not been previously submitted for a degree or diploma at any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except when the references are made.

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Acknowledgements

Dedications

To my parents Ouanassa & Djamel,

To my siblings, Messaoud, Rami and Lina

And in memory of aunt Kamilia and my

grandfather Messaoud

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Key to Abbreviations and Acronyms

AAA	Aures Aviation Academy
AE	Aviation English
AELTS	Aviation English Language Testing System
AOE	Aviation Operations Expertise
ATC	Air Traffic Controller
ATPL	Airline Transport Pilot Licence
Bac	Baccalaureate Degree (Secondary School Graduation Degree)
CAAi	Civil Aviation Authority International
CPL	Commercial Pilot Licence
CSs	Communicative Strategies
DOI	Digital Object Identifier
EALTS	English for Aviation Language Testing System
EAvP	English for Aviation Purposes
EEP	English for Educational Purposes
EFL	English as a Foreign Language
ES	Expert Speaker
ESP	English for Specific Purposes
FSs	Formulaic Sequences
GE	General English
ICAO	International Civil Aviation Organisation
IL	Interlingual Transfer
L1	First Language / Mother Tongue
L2	Second Language
LPRs	Language Proficiency Requirements
LSA	Language Solutions Algeria (School)
LSE	Language Specialist Expertise
LTAS	Language Testing and Assessment Services
NA	Needs Analysis

NAI	Needs Analysis and Identification
NNS	Non-Native Speaker
NS	Native Speaker
OACI	L'Organisation de l'Aviation Civile Internationale
PPL	Private Pilot License
PRICESG	Proficiency Requirements in Common English Study Group
R/T	Radiotelephony Communication
RELTA	Royal Melbourne University of Australia's English Language Testing for Aviation
RMIT	Royal Melbourne Institute of Technology
SARPs	Standard and Recommended Practices
STT	Student Talking Time
TTT	Teacher Talking Time
UK	United Kingdom

Abstract

Since 2003, the English language has been the main language for one of the most flourishing businesses, which is international aviation operations. In Algeria, the language is considered as a secondary subject in this field. In this study, the researcher opts for discussing plain English, which pilots and air traffic controllers use for non-routine situations such as incidents and unusual circumstances. This focus comes because of the great importance of communicative competence in these situations and its positive effect on avoiding catastrophes. Thus, the researcher discusses theoretically formulaic language, communicative competence, English for Specific Purposes and aviation English; then conducts a case study investigation at Aures Aviation Academy with novice and operational candidates in aeronautics. He takes advantage of the nature of the case study approach to use a variety of research instruments namely questionnaires, interviews and classroom observation to elicit the target and learning needs on which he bases the adapted syllabus. The main aim is to implement formulaic sequences within the adapted syllabus as they have a positive effect on learners' conversation competence. For this, the researcher conducts a needs analysis process to determine learners' target and learning needs to help them avoid any breakdown of communication and ensure flights' safety. The research results indicate a need for conversation competence especially on non-routine situations. The researcher recommends focusing on formulaic sequences for reaching fluency and communicative competence, and to fulfil the International Civil Aviation Organisation's language requirements. He also finds that these prefabricated chunks of language, alongside their constant occurrence in aviation talk, both aviation phraseology and plain English, help aviation professionals comprehend and produce accurate messages in shorter periods of time as required by the International Civil Aviation Organisation.

GENERAL INTRODUCTION

General Introduction

English is nowadays the international language for science and technology. This language has become the first means of communication among communities with different linguistic backgrounds like the gulf and eastern Asian countries in order to join the international atmosphere for different purposes. As a means of integration, English helps individuals and communities prosper and develop in a faster pace. Scientists and researchers are the first to be concerned because of the large number of resources and updated references.

In addition, professionals around the world are as concerned as the former because of the status of the English language and the role it plays in exchanging data and sharing information. More precisely, professionals who need to communicate using the language with the international community are required to develop their communicative skills and be proficient enough to perform well, develop skills in the related field of expertise, and to manage a successful integration process.

The aviation business is one of the most developing fields in today's economy. Algeria, similar to several other countries, and according to the Royal Melbourne University of Australia's English Language Testing for Aviation, a study conducted by experts for the sake of testing Algerian aviation professionals English language proficiency, is developing its aeronautical system on a rate of 12% per year. The development is concerned mainly with the international flights and creating new destinations with developing the size of national companies' flees. Since English is the international language of aviation, Algeria is taking serious steps to develop aviation professionals' English language proficiency through extensive instruction and assessment. However, the efforts made up until now are not sufficient and more researchers need to investigate this area of study in the country.

The need for proficient language learners and users in the Algerian aeronautical system comes as a result of the ICAO (The International Civil Aviation Organisation) language requirements. Pilots and air traffic controllers need to be

proficient to fulfil the ICAO language requirements and at the same time to avoid any breakdown of communication that may lead to catastrophes. The aviation phraseology, which is a highly technical encoded system of communication, does not pose communicative difficulties for aeronautics professionals in Algeria or all over the world.

Nevertheless, plain English, which is considered more natural and creative than the strict aviation phraseology is needed as well. One may ask about the reason for plain English if there is phraseology to use for communication; simply put, phraseology does not serve and fulfil all communicative needs in radiotelephony communication between pilots and air traffic controllers.

To elaborate, plain English is highly required in non-routine situations; in other words, incidents, pans, and unusual circumstances are all considered non-routine situations where phraseology is not sufficient to find solutions for these issues. Thus, plain English is the only option left for radiotelephony communication. Professionals here must be proficient and fluent to avoid any misunderstanding bearing in mind that the timing on radiotelephony is a critical factor and our aviation professionals must react accurately and have a developed listening comprehension and oral language production.

The researcher focuses more on avoiding misunderstanding and developing novice pilots' and air traffic controllers' comprehension and fluency through the accurate understanding and use of formulaic sequences. The researcher's interest on this subject comes as a result of his extensive studies on aviation English and the ICAO linguistic requirements. The developments and studies made in this field urge non-native speakers to develop the needed language skills to ensure flights' safety since communication breakdowns are either primal or secondary factor in more than 80% of aviation incidents/accidents.

The researcher, as stated earlier, focuses on formulaic sequences because of their holistic nature and faster acquisition and processing that may well serve radiotelephony communication. Additionally, formulaic sequences present more than 50% of everyday speech and they are a main factor for developing learners' communicative competence.

GENERAL INTRODUCTION

Consequently, the researcher tries to draw attention to this matter in general and this research in particular because first, the Algerian aviation system still depends on the French language in instructing novice pilots and controllers; moreover, operational pilots and controllers still use French on both national and international flights and use English only when they have to. Second, and as argued above, communication breakdowns are the cause of more than 80% of incidents and accidents, being proficient in English is not recommended anymore, but required. Third, formulaic language, and because of its holistic nature of acquisition and use, faster processing, its similarity to phraseology, and finally its positive effect on developing learners' communicative competence, the researcher recommends the implication of these formulae on both general and ESP course.

The implementation of formulaic sequences in an ESP course necessitates the development of the former first. Researchers recommend the identification of learners needs to be able to ensure the efficacy of the course; these needs are framed as the needs for the target situation, students' language background that determines their lacks and finally their wants.

The first information the researcher acquired concerning ESP course is that there was nothing of the stated above (learners' needs analysis). The researcher as well noticed the learners' negative attitude towards the course and their generally low level of proficiency taking into consideration the majority of the learners. In addition to the other factors stated in this section, the researcher found himself in a position where English needs to be developed and implications need to be stated after conducting this research. To do so, the researcher asks the following questions:

1-   What are the contexts requiring the use of English by Algerian pilots and air traffic controllers?

2-   Does ESP course offered to aeronautics professionals include formulaic sequences, and how it is therefore delivered?

3-   Do pilots and air traffic controllers need to learn all the varieties of formulaic language?

4-   To what extent is formulaic language important in reaching a native-like fluency (proficiency)?

To provide convincing answers for these questions, the researcher proposes the following research hypotheses.

1- Pilots and air traffic controllers need English just on radiotelephony communication.

2- EOP courses attended by aviation professionals do not include enough formulaic sequences.

3- Pilots and air traffic controllers need to learn specific kinds of formulaic sequences that suit their profession.

4- Formulaic language is a crucial step on the path of reaching language proficiency.

With taking into account these hypotheses, the researcher sets a number of objectives to be reached at the end of this research, they are as follows:

1- Show the importance of formulaic sequences to foreign language learners.

2- Put a frame on (limit) the scope of formulaic sequences needed by pilots and air traffic controllers.

3- Illustrate the importance of formulaic language for reaching proficiency.

4- Propose ways and methods to learn formulaic sequences.

These objectives are set to be reached at the end of this study that discusses in its first chapter ESP in general and argues setting aviation English as a subfield of ESP. In addition, it discusses ESP situation in Algeria and the development of aviation English and Aures Aviation Academy as a provider for piloting trainings and ESP course. Within the second chapter, the researcher conducts a theoretical study of formulaic language, its background, sub-fields and its occurrence in aviation.

The third chapter is mainly devoted to the describing the research situation and methodology. The fourth chapter presents the beginning of the fieldwork general procedure with the needs identification and analysis. The fifth chapter discusses the course adaptation process and presents samples while the sixth presents the last step in ESP course adaptation, which is mainly assigned to learners' assessment and course evaluation.

CHAPTER ONE: ESP & Aviation English, State of the Art

CHAPTER ONE: ESP & Aviation English, State of the Art

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1.1 Introduction

The English language has become the first international language and the communication medium used by most communities around the globe. The wide spread of this language is due to the British Empire wide influence on several nations at that time especially by businesses and trade. After the Second World War, the USA (The United States of America) has become the major military and economic power worldwide by picking up where the British Empire has left off. By investing in science and technology, the USA has grown, to ensure, not only as a continental power but as a global one as well. What came after is summarised in the media and cultural development of the English speaking nations that tracked the paved way set centuries ago, making English the first global language. As predicted by Sapir (1931) and recognised by Crystal (1997) stating that a language achieves a genuinely global status when it develops a special role that is recognized in every country.

The latter quote can only reinforce the assumption stating that English is the first global language. The use of English as a recognised language in every country no matter how specialised or minimal the status is, gives the language a higher status globally. The specific use of language, i.e., ESP (English for Specific Purposes) has become a flourishing field of study focusing on saving time and effort to create target situations language requirements study materials and content to keep up with the fast developing nations.

Aviation English plays an important role in the development of ESP in general since the language requirements set by the ICAO (The International Civil Aviation Organisation) are crucial to the safety of international flights and any misunderstanding between aviation professionals on duty can cause high-risk incidents and accidents.

After elaborating what ESP is about, we intend to provide literature on aviation English and the state of English in the Algerian civil aviation operations. In addition, we will discover Aures Aviation Academy as a leading association and school that develops aviation in Algeria with its numerous operations in training, testing... etc.

1.2 The Emergence of ESP

This question might be the beginning of any research conducted in ESP as a research area. Following the historical development of the English language, we find that the most recent criterion that helped the globalisation of this language was science and technology.

To answer this question, scholars such as Dudley-Evans and St John (1998) believe that the study of language for specific purposes has a longer history than we might believe, as long as the Roman and Greek Empires even. However, in the 1960s ESP has been developed to be an essential part of teaching English as a second or a foreign language. As a result, and following the global evolution in all aspects and fields in relation to the historical influence of English speaking nations, English has become the language of development as far as science, technology, and commerce are concerned.

From another perspective, Harding (2007) believes "ESP has come to prominence in the 1970s" (p. 3). He adds that the emergence of ESP came in response. First, to the great number of students from all over the world seeking educational and professional careers in the UK (University students).Second, the establishment of new universities in several parts of the world like the gulf countries and Malaysia. The latter might be directly related to the 1970s oil crisis that made developed countries, mainly the USA as a major consumer, to deport their knowledge and finances to the gulf countries as oil-rich nations and share them using the English language of course.

In addition to the former perspectives on the emergence of ESP, Hutchinson and Waters (1987) believe that the variation of the contextual use of language has a great impact on the emergence of ESP. It is quite apparent that meeting the communicative needs of learners is highly required to accomplish the same needs in these specific situations by tailoring instructional materials suitable to the whole circumstance. Furthermore, they believe that learners follow diverse objectives, are differently motivated, use different skills, and apply several learning strategies; thus, scholars had to spotlight the target and learning needs as well.

To sum up, different nations and communities had and still have to keep up with the rapidly change world. This would primarily be achieved through science and technology and successful trade. The English language as a shared means of communication must be well controlled, and teaching ESP is highly required to master numerous fields of science, and to keep up to date with the new world.

1.2.1 Defining ESP and its Development

In drawing a theoretical comparative study on the different perspective set by scholars concerning English for Specific Purposes, we can initially say that the first group believes that ELT (English Language Teaching) is all teaching for a specific purpose, be it teaching for exams, for fulfilling other academic or occupational requirements, or even learning languages for leisure. However, the second group believes in ESP to be a process that begins with the analysis of learners' needs and using the outcomes to design courses and teaching materials that aim to help students develop their language performance in a given target situation. On a chronological order, we will discuss different definitions and perspectives towards ESP by pioneers of this flourishing field of study.

ESP has emerged in the 1960s; nevertheless, it has taken more time than expected from scholars to come up with the first definition for this approach. Mackay and Mountford (1978) focus more on the content of ESP session and the objective of the course created. They believe that this is a situation directed set of expressions and forms by stating that ESP is "A restricted repertoire of words and expressions selected from the whole language because that restricted repertoire covers every requirement within a well-defined context task or vocation" (P. 4)

They correspondingly add that, ESP Is:

Generally used to refer to the teaching of English for a clearly
utilitarian purpose, this purpose is usually defined with reference
to some occupational requirements, (e.g. for international
telephone operators)… or vocational training programmes, (e.g.

for hotel and catering staff)…or some academic or professional

study, (e.g. engineering)… (P. 1)

Thusly, we can say that the focus in this period was on the content itself and what type of language ESP learners should be exposed to. Additionally, this period was characterised by spotlighting one of the most important aspects of ESP that is the situational/contextual nature of the language presented.

The next couple of decades witnessed new perspectives added to the previous ones on ESP. Harmer (1983, p. 1) argues that in order for them to learn a language, students who belong to these language situations have precise reasons to do so. Mc Donough (1984) describes ESP as a language teaching activity with its own precedence and focuses. Eventually, Hutchinson and Waters (1987) came to introduce the language analysis in relation to ESP, they state, "the view gained ground that the English needed by a particular group of learners could be identified by analysing the linguistic characteristics of their specialist area of work or study" (p. 8) –needs analysis- . As a result, it is quite apparent that the analysis of language selected for learners is required, and this necessity encompasses learners to the situation itself.

Most recent research on ESP came to summarise the former findings in order to elaborate a single satisfactory definition for ESP in general. Dudley Evans and St John (1998) build on former definitions, and centre their work on the methodology used in ESP that is, different from the one of GE (General English). The methodology that, according to them, "reflects the disciplines and professions it serves" (p. 4). They describe this different methodology as "the interaction between the teacher and the learner" (*ibid*) where the teacher is more of a language consultant and a learner of a new area by having a similar status with his students who have the experience in this domain.

From the students' side now, Basturkmen (2006) affirms that "in ESP, language is learnt for its own sake or for the sake of gaining a general education, but to smooth the path to entry or greater linguistic efficiency in academic, professional, or workplace environment" (P. 18)

We sum up this part with the latest definition found in literature. According to Harding (2007) the objective of learning the language is vital and directly linked to what the recipient needs in his/her vocation or occupation meeting his/her linguistic necessities. As a result, ESP is considered as a set of actions and activities based on learners linguistic needs to be concluded with a successful operational communication on their vocational or occupational environment. To put the simplest definition as a conclusion, Dudley Evans and St John (1998) identify ESP as "the language for getting things done". Next, and according to them, we will discuss the characteristics of ESP in terms of absolute and variable characteristics.

1.2.2 Dudley-Evans & St John's absolute and variable characteristics of ESP

In 1998, based on their studies and previous literature, mainly (Strevens, 1988), Dudley-Evans and St John have provided a number of characteristics that shape ESP and its definition and divided them into the following:

- **Absolute characteristics (certain)**
    - ESP is defined to meet specific needs of the learners;
    - ESP makes use of underlying methodology and activities of the discipline it serves;
    - ESP focuses on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genres appropriate to these activities.

- **Variable characteristics (uncertain)**
    - ESP may be related to or designed for specific disciplines;
    - ESP may use, in specific teaching situations, a different methodology from that of General English;
    - ESP course is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
    - ESP is generally designed for intermediate or advanced Students;

- Most ESP courses assume some basic knowledge of the language system; but it can be used with beginners. (P.4-5)

We can notice the importance of absolute characteristics to all ESP branches, aviation English included. However, variable characteristics can be found in ESP branches and not in others, depending on the register (corpus) dealt with, and the target/learning needs of students... etc.

1.2.3 ESP vs General English

The differentiation process between ESP and GE (General English) has taken much attention from researchers and scholars throughout decades of studies now. Similar to teaching general English, ESP is a whole process based on the nature of language, teaching, and learning. Nevertheless, it is quite complicated to draw a line between the two. Strevens (1977) asserts that ".... difficulties of drawing a line between general and special purposes is not easy to overcome…" (P. 11). General English, or as unfairly referred to as "English for no obvious purposes" is mostly labelled as the language taught in primary and secondary schools.

The distinction scholars focus on is in terms of teachability and content. GE is the language taught for general purposes of the language and a general educational aim. Alternatively, as Basturkmen (2006, p. 9) puts it "... Whereas General English teaching tends to set out from point A towards an often ...-indeterminate destination... ESP aims to speed learners through to a known destination". Thus, we cannot assume that GE is teaching language for no reasons. On the other hand, Hutchinson and Waters (1987) believe that the dissimilarity between GE and ESP is not limited to the need but the awareness of the need.

The second aspect we can discuss to differentiate between the two is the age factor as GE is taught in primary and secondary schools. However, ESP sessions are mainly devoted to adult, highly motivated learners. These learners already have a working basic knowledge on general English and seek specialised courses to fulfil several professional, academic, or scientific objectives. As a result, they are well

aware of their needs and they realise the significance of the linguistic requirements of the target situations.

1.2.3.1 The Teaching Content and Approach

As far as the teaching content and approach are concerned, teaching GE in Algeria has taken a step forward by adapting the CBA approach (Competency based approach); that is to say, teaching English in middle and secondary schools is moving towards a learner-centred approach similar to ESP. What makes the latter more specialised in a way is the requirement of its process for a needs analysis procedure that allocates an ultimate importance to learners' necessities and aims. GE courses do not fully fulfil the latter. As a result, it is still a language-centred course approach focusing on all language skills development and the socio-cultural feature of the English speaking communities, which contrasts with ESP courses.

As for the content, Waters (1990) declares "the only practical way in which we can understand the notion of special language is a restricted repertoire of words and expressions selected from the whole language because that restricted repertoire covers every requirement within a well-defined context, task or vocation" (p. 53). To elaborate, and in relation to our case study, the restricted repertoire stated earlier is aviation phraseology that is, fixed lexical items (words and expressions) selected from the English language to fulfil communicative requirements in target contexts and situations.

Nonetheless, it is not sufficient for our aviation professionals to acquire the aviation phraseology solely; as a matter of fact, it is quite a risk not being communicatively competent using plain English. Mackay and Mountford (1978, p. 4) clarify this aspect stating that: "However, such restricted repertoires are not languages, just as a tourist phrase book is not a grammar. Knowing a restricted 'language' would not allow the speaker to communicate effectively in novel situation". Moreover, "novel situations" fits perfectly our study's non-routine situation is aviation operations where plain English is not only recommended but also highly required.

1.2.3.2 Teaching Aims and Objectives

In terms of teaching aims and objectives, GE or General ELT (English Language Teaching) distinguish between teaching aims (the eventual target behaviours of the students) and objectives (the pedagogical means hoped to enable the students to achieve the eventual target behaviours).In contrast, ESP courses depend on direct objectives and aims stating what the learner is supposed to be like, language wise, rather than "working out the pedagogical means to achieve those ends" (*ibid*).

To sum up, GE courses aim to develop learners' general language knowledge to help resolve communicative difficulties and avoid breakdown of communication. On the other hand, and depending on the specific field of ESP, these sessions offer students a limited repertoire of lexical items and language skills/strategies, only to communicate and function in target situations. In aviation, this causes communicative issues that may lead to catastrophes. Learners should be able to communicate effectively not only using the "limited language repertoire" i.e., aviation phraseology, but also plain English that is required in non-routine situations like incidents and accidents.

1.2.4 Different Types of ESP

ESP is a subclass of ELT, setting this apart, the former has developed exceptionally fulfilling the requirements that have been the cause of its widespread. Worth mentioning the extensive technological development in a great number and fields of expertise emerged. As many as proposed subclasses by several scholars and linguists, Hutchinson and Waters (1987) synthesise the most recognised and useful categorisation as English language teaching branches known as the tree of ELT (See Appendix 11).

Within their classification, ESP is subcategorised into three essential fields:
a) English for Science and Technology (EST),
b) English for Business and Economics (EBE),
c) And English for Social Studies (ESS).

These field classes are according to the vast development of the modern world and globalisation requirements. Science and technology as leading aspects of development and evolution; also, business and economics as a necessary factor for trade and complimentary to the scientific progress, and finally, social studies as the field with the largest human studies and researches that help guiding both former fields. Each single field leads to further sub-branches: English for Academic Purposes (EAP), and English for Occupational Purposes (EOP). An example of EOP within the EST field is "English for Technicians"; whereas and example of EAP in the same EST field is "English for Medical Studies".

Robinson (1991) follows this categorisation and elaborates the contextual setting in which the different ESP course in accordance to the fields mentioned earlier are as we notice on the following diagram:
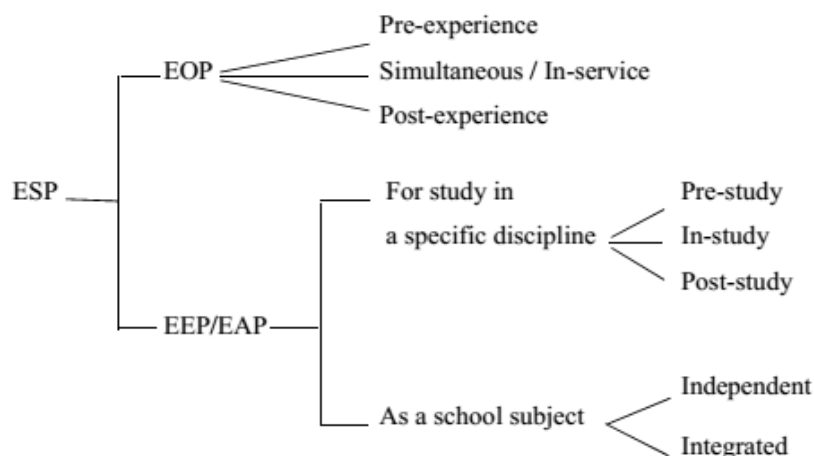
Diagram 1. 1 ESP Family Tree (Robinson, 1991, p. 3)

To elaborate the diagram above, and as far as the contextual setting and the purpose of the session, EOP includes three different courses:

- Pre-experience courses: they are English language courses that come before, and pave the way for the training programme or occupation/work.
- Simultaneous courses: courses occur during the training programme or the job.

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- Post-experience: the English language session takes place after the intended training programme or occupation.

However, EAP courses teach English as:

- Discipline based instruction: the course is planned as a pre-study session, in-study session (during the instructional period of the discipline or specialty), or finally as post-study sessions that come after the specialty instruction stage.

- As a school subject: here the English language can be either included with different subjects within one or several courses (integrated), or can be isolated from the other courses and taught alone (independent).

1.2.5 EAP vs EOP

➢ *EAP*

Teachers design EAP courses for keeping students from different specialisation up to date of what is new in their study fields. This is chiefly the effect of the widespread of the English language and its status as a lingua franca. Students learn the English language through EAP courses in their institutions to be able to read materials in their field of specialty. Moreover, to write reports and conduct research, listen to lectures and develop communicative skills, and to be able to prepare oral presentations and learn to report findings and share outcomes orally. Additionally, to learn how to manage conversations and avoid any breakdown of oral communication.

Robinson (1980, p. 7) asserts that "English for Academic Purposes or study skills, i.e. how to study through the medium of English regardless of the subject matter or of the studies."; on the same breath, Kennedy and Bolitho (1984) assert that "EAP is taught generally within educational institutions to students needing English in their studies." (P. 4)

➢ *EOP*

English for occupational or vocational purposes is the language needed for performing tasks in a specific job, the language that is for service contexts. To elaborate, EOP is teaching the English language that is a part of a certain occupation

or as an important requirement for this job. In addition, EOP meets the linguistic requirements for jobs desired by these learners in order to be able to perform their tasks and responsibilities. Kennedy and Bolitho (1984) confirm this by stating, "EOP is taught in a situation in which learners need to use English as part of their work or profession." (P. 4); i.e., teaching them the language needed to perform their professional obligations and duties.

  ➢ *The Difference*

Hutchinson and Waters (1987) believe that there is no satisfactory distinction between EAP and EOP, they assert that "…. people can work and study simultaneously; it is also likely that in many cases the language learnt for immediate use in a study environment will be used later when the student takes up, or returns to, a job" (p. 12). As far as our case study is concerned, the language learnt by students in scientific streams in university before having the training and becoming operationally active pilots or aviation professionals is also required during their training and for their professional tasks and duties.

From another perspective, several scholars and linguists believe that there are differences between the two. Robinson (1991) says "EAP is thus specific purpose language teaching, differentiated from EOP by the type of the learner: future or practising student as opposed to employee or worker." In other words, EOP courses train students to be better in performing their occupational tasks; however, EAP develops learners study skills like reading specialised materials, writing academically, comprehending recorded or live academic discourse and lectures, and finally produce formal presentations.

1.2.6 ESP Course Design

Course design is a structured outcome. In other words, it is the result of the needs analysis process, the designer's perspectives on methodology and syllabus approach, in addition to already existing materials (Robinson, 1991). All of the structured outcomes aim at enabling the learners to perform different communicative acts on the target situation efficiently. Here are a number of perspectives in the form of definitions on how scholars see course design and what the process consists of:

- And Strevens (1977) describes ESP courses as:
Those in which the aims and the context are
determined principally or wholly not by criteria of
general education but by functional and practical
English language requirements of the learner. (p.
90)

- While Munby (1978) states that ESP courses are:
"Those where the syllabus and the materials are
determined by the prior analysis of the
communication needs of the learner". (p. 2)

- Hutchinson and Waters (1987) describe it as "An
integrated series of teaching-learning experiences,
whose ultimate aim is to lead the learners to a
particular state of knowledge". (p. 65)

- Belcher (2006) confirms that "ESP assumes that the
problems are unique to specific learners in specific
contexts and thus must be carefully delineated and
addressed with tailors to fit instruction". (p. 135)

From different viewpoints, we can conclude that course design is a highly
structured process that begins with an accurate identification of needs on which the
designer bases his selection, adaptation, and creation of materials and methods in
order to assist the learner reach a given state of knowledge compatible with what the
target situation requires for an successful communication.

- **The Process According to Hutchinson and Waters**

According to Hutchinson and Waters (1987), an ESP teacher must be able to
answer the following questions as they believe that "Designing a course is
fundamentally a matter of asking questions in order to provide a reasoned basis for

the subsequent processes of syllabus design, material writing, classroom teaching and evaluation" (p. 21):

- **Why** does the student need to learn?
- **Who** is going to be involved in the process?
- **Where** is the learning to take place? And what potential does the place provide? What limitation does it impose?
- **When** is the learning to take place? How much time is available? How will it be distributed?
- **What** does the student need to learn? What aspects of language will be needed and how will they be described? What level of proficiency must be achieved? What topic areas will need to be covered?
- **How** will the learning be achieved? What learning theory will underlie the course? What kind of methodology will be employed?

A glimpse on these questions will make the designer believe that course design is not a simple procedure and it takes both time and energy in addition to finances to answer these questions. Some of them as Hutchinson and Waters state are manageable and we can answer them research, teacher's intuition or theoretical models.

The questions come under three main captions as the following figure shows:
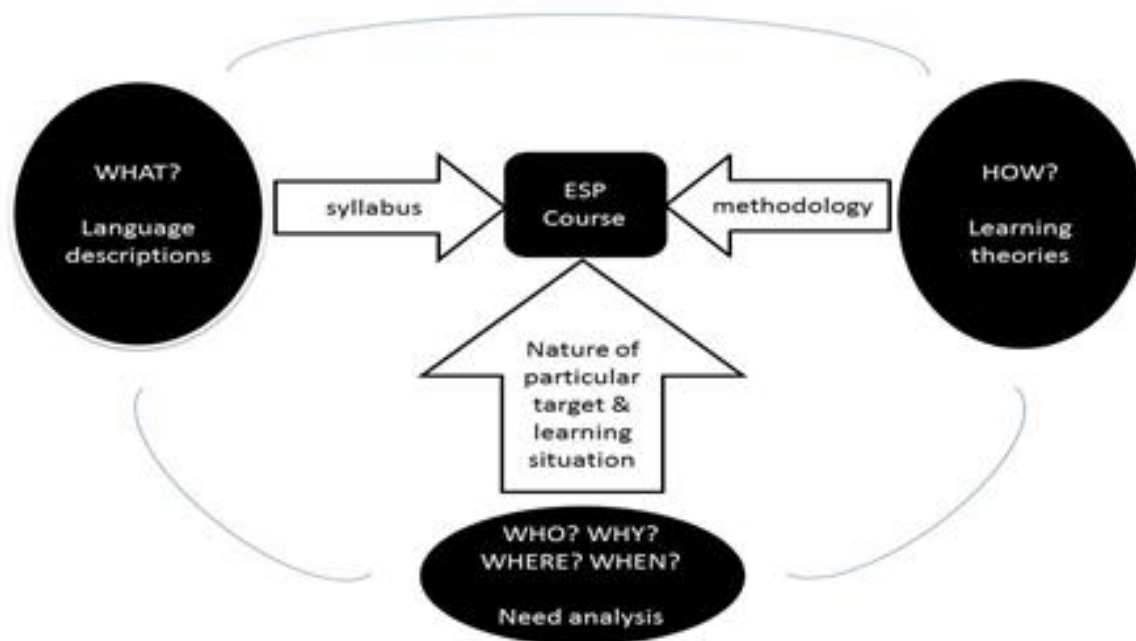
Figure 1.1: Factors Affecting ESP Course Design (Hutchinson and Waters, 1987, p. 22)

They make sure that the categorisation and division of questions is in relation to factors that affect ESP course design quality and efficacy. First, language descriptions refer to the aspects and language skills learners develop during the session; second, the learning theories are in discussion to provide a framework of the teaching methods and techniques used for the specific sample population since these might differ according the audience; in other words, how do they like to learn? Young and adult students learn differently, so as high and low achievers; thus, it is important to consider different teaching strategies to adopt/adapt the one suitable for the audience. Finally, answering the questions "who?", "Why?", "Where?" and "when?" provides data for the designer to have a hand during needs analysis on the nature of particular target and learning situation. The designer, accordingly, must cover all the factors stated with care to reach the intended aims for a satisfactory teaching/learning experience. That is what makes the whole process complex especially in application. There are several elements that need to be taken into account in order to design an ESP course. The following figure collects these elements into a number of factors affecting the course design procedure.
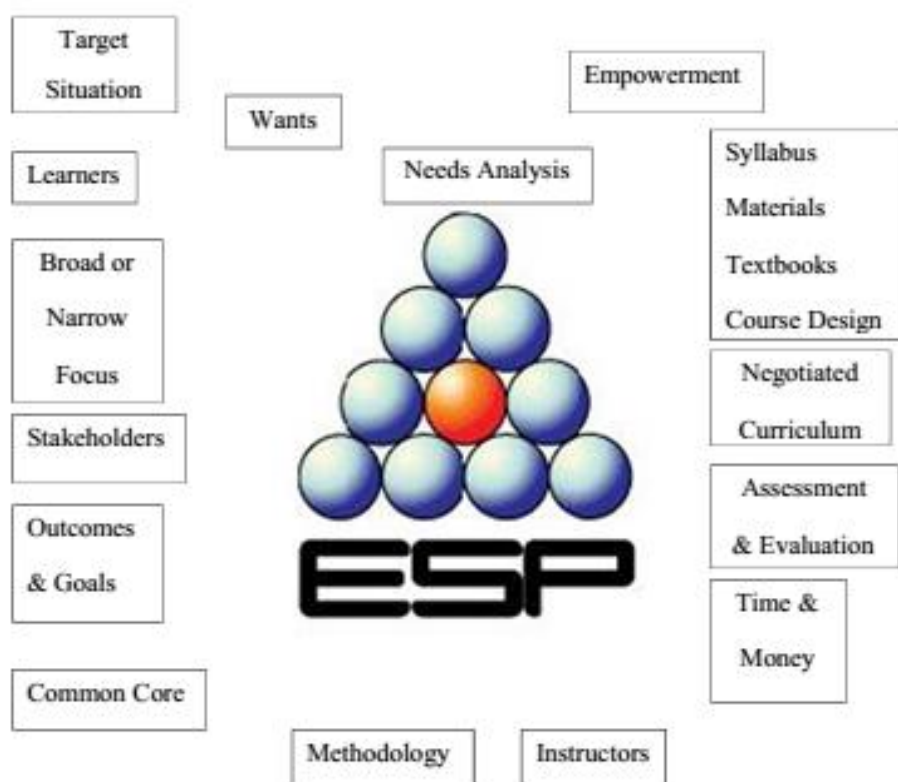
Figure 1.2: Juggling ESP Balls (Brunton, 2009, p. 9)

The figure above illustrates the difficulty and complexity of ESP course design operation as a whole. The large number of factors affecting the course design and features that the designer can have limited control over (ex: time and money) are what makes the process as a whole challenging mostly in application.

1.2.7 ESP Teaching Operation

ESP teaching operation is an organised process based on specific criteria following a number of pre-determined steps. Hutchinson and Waters (1987) claim that there is neither a clear difference between ESP course and any other type of courses; nor between ESP teaching operation and other types of teaching as they all aim at ensuring effective teaching and efficient learning.

> ESP teaching operation is essentially based on specific criteria generalised in the communicative needs of the learner. Munby

(1978) clarifies that "ESP courses are those in which the
materials are essentially determined by the analysis of the
communicative needs of the learner rather than by non-learner-
centred criteria such as the teachers' and institution's
predetermined preference for treating English as a part of a
general education". (cited in Benyelles, 2009, p. 34)

What we can deduce from both perspectives is that ESP teaching operation is
a systematic process based on different criteria that serve and ensure both effecting
teaching and efficient learning for students to improve their communicative skills
through a variety of situation-related linguistic aspects and skills.

1.2.8 Different Approaches to ESP Course Design

ESP course designer is restricted to certain aspects and must take into
consideration a number of criteria while designing ESP course. Giving the two sides
of the continuum, from the data collection and examination for needs identification
and analysis, to fulfilling the course aims and target situation linguistic requirements
the designer follows structured steps; however, it is highly recommended that the
designer leaves his/her personal touch through a creative and unusual aspect in the
designed items. Hutchinson and Waters (1987) believe that "There are probably as
many different approaches to ESP course design, as there are course designers" (p.
65). Consequently, the researcher believes that there should always be some personal
touch by the designer within the aspect studied in relation to ESP or within the
designed items in relation to the target situation necessities. They namely recognise
three main approached to ESP course design, which are language-centred, skill-
centred and learning-centred approach.

1.2.8.1 Language-Centred Course Design

The language centred approach is compatible in both theory and practice
among the rest of the course design approaches suggested by Hutchinson and Waters
(1987). They believe that this approach aims at drawing a link between the analysis

of the target situation and the content of ESP course (p. 66). The following figure summarises the process:

```
┌─────────────────────────┐          ┌─────────────────────────┐
│  Identify learners' target│          │  Select theoretical views of │
│       situation          │          │        language          │
└─────────────────────────┘          └─────────────────────────┘
             │                                      │
             ▼                                      ▼
          ┌──────────────────────────────────┐
          │  Identify linguistic features of   │
          │         target situation          │
          └──────────────────────────────────┘
                            │
                            ▼
          ┌──────────────────────────────────┐
          │           Create syllabus          │
          └──────────────────────────────────┘
                            │
                            ▼
          ┌──────────────────────────────────┐
          │         Design materials to        │
          │       exemplify syllabus items     │
          └──────────────────────────────────┘
                            │
                            ▼
          ┌──────────────────────────────────┐
          │        Establish evaluation        │
          │   procedures to test acquisition   │
          │         of syllabus items          │
          └──────────────────────────────────┘
```
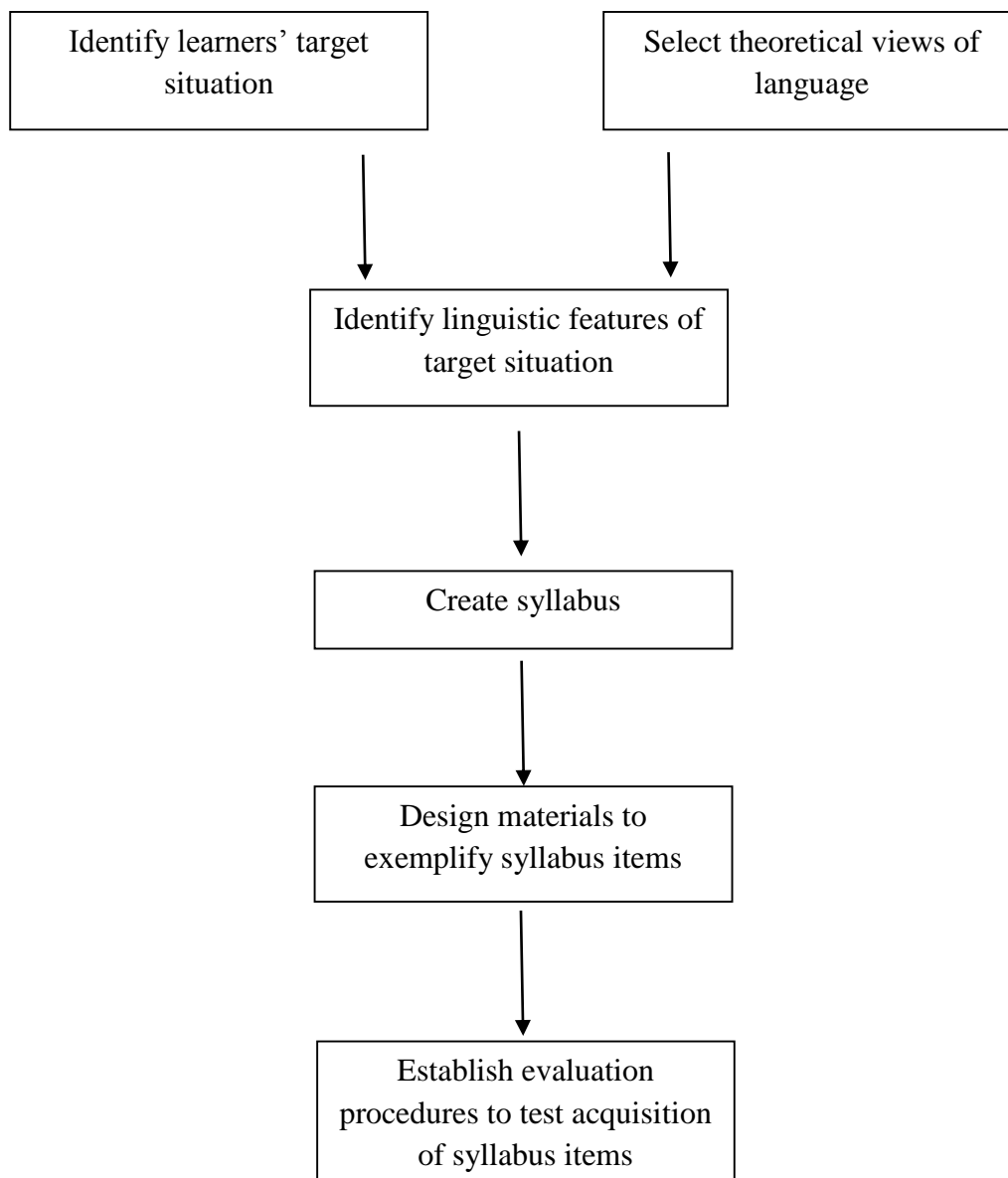
Figure 1. 3 : A Language Centred Approach to Course Design in ESP (Hutchinson and Waters, 1987, p. 66)

Although this procedure seems to be fulfilling the main aim of any ESP course by analysing the target situation linguistic/communication requirements and use them as the basis of the selected/ designed materials, Hutchinson and Waters still find some weaknesses with the procedure that are to be considered:

a) They characterise the process as learner-restricted rather than learner-centred for the simple reason that language centred course design takes the learners as to identify the target situation only without including the learner in any further stages of the process. The following figure summarises the idea:
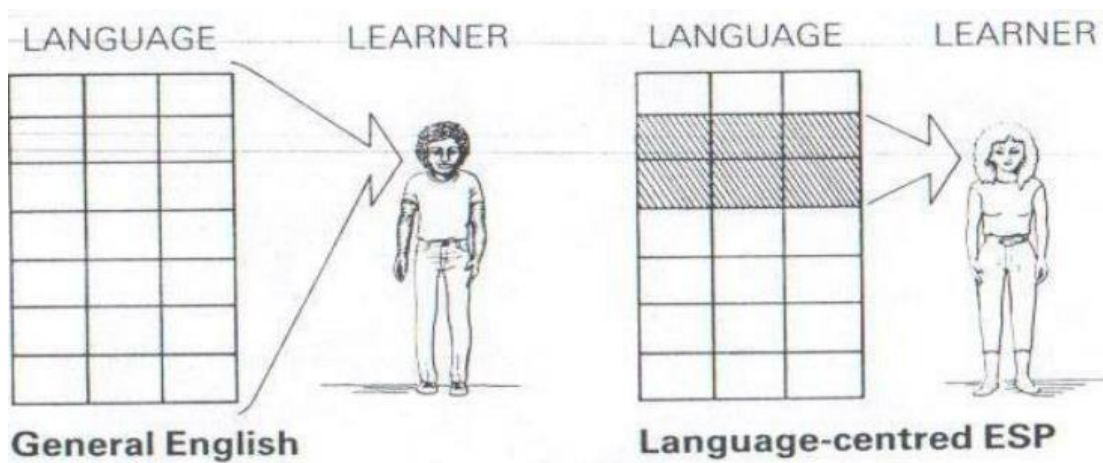
Figure 1. 4 : The Learner-Restricted Syllabus (Hutchinson and Waters, 1987, p. 67)

In consequence to the latter, the learner plays a restricted role within the process; nevertheless, the scholars above highly recommend that the learner must be considered at every stage of the procedure;

b) They consider the learner-centred approach as an inflexible and static procedure. In other words, the designer will feel him/herself within and obstinate set of stages at the end of the process, s/he will not have any hand in reassessing and fixing whatever might go wrong with the first analysis. As a result, they recommend flexibility, feedback channels and error tolerance which this procedure lacks;

c) The third point they discuss is describing the shortcomings of the learner/language-centred approach, is the fact that as much as the process appears to be systematic it is still not a guarantee that learning itself is systematic. They add "... that the systematic analysis and presentation of language data will produce systematic learning in the learner" (p. 68); however, and as a result, the systematic analysis of data and knowledge in

addition to their systematic presentation during the course do not guarantee them to be systematically learnt by students. Basturkmen (2010) relates "the assumption that the systematic analysis and presentation of linguistic data characterising a certain type of specialised discourse will produce systematic learning in the learner" (p. 59);

d) The element of inflexibility of the language-centred approach stated above in (b) is relative to this element discussed here. Hutchinson and Waters (1987) believe that this model does not take into account factors that are inevitable in designing a course. It is not time to discover these factors, not during the analysis of data for creating the content of the syllabus and pedagogical materials. However, their influence is, as stated above, inevitable, and they play a major role in the success of ESP course. As an example, Hutchinson and Waters suggest that subjects and contents of the course must be interesting, this would not occur during the analysis of the data gathered; still, interesting materials play a major part in fulfilling the course's aims. Finally, they believe that the language-centred analysis of target situation does not reveal what is necessary but rather what is on the surface level only. More accurately, "it reveals little about the competence that underlies the performance" (P. 68)

In sum, the strict, structured, logical and clear-cut nature of the language-centred approach is what marks it out as a non-complete approach surrounded by a number of weaknesses. It lacks acknowledging the importance of the learner in every stage of the process in addition to its varying and individual uniqueness as a human.

1.2.8.2 Skills-Centred Course Design

This approach came as a response to the great need of the English language in Latin American universities and colleges where students have limited command on the language. Thus, the launch of any ESP projects isfor developing students' ability to read materials in English. According to Hutchinson and Waters (1987), the skills-

centred approach lays on two principles; the first is theoretical while the second is pragmatic:

a) Since the skills-centred approach came as a reaction to the language-centred approach, the former treats language as a set of skills and strategies allowing the learner to comprehend and produce language as they explain (p. 69). a skills-centred approach aims basically at going deeper than just the surface level of performance but rather look at the competence that underlies the performance. Creswell (2003) adds "The theoretical hypothesis that underling any language behaviour, there are certain skills and strategies, which the learner uses in order to produce or comprehend discourse" (p. 124).

b) Secondly, skills-centred approach has a pragmatic basis and Widdowson and Homes (1981) explains it between goal-oriented courses and process-oriented courses, which refer to skills-centred according to Hutchinson and Waters. Holmes (1982) spotlights the narrowing of "needs" within the necessities of the target situation that sets the goals of the course. According to both Widdowson and Holmes, it is closest to admitting that a large number of students will fail; and to avoid that, they propose the process-oriented approach that removes the distinction between ESP course and the target situation.

The skills-centred covers the main lack of the language-centred approach by involving the learner more in the whole process. Hutchinson and Waters (1987) state the following as the main characteristics of the skills-centred approach:

- It views language in terms of how the mind of the learner processes it rather than an entity in itself;
- It tries to build on the positive factors that the learners bring to the course, rather than just on the negative idea of 'lacks';
- It frames its objectives in open-ended terms, so enabling learners to achieve at least something. (P. 70)

The skills-centred approach aims to develop learners' language skills and strategies and continue to develop even after the end of the course, the figure below illustrates the main stages of the process:
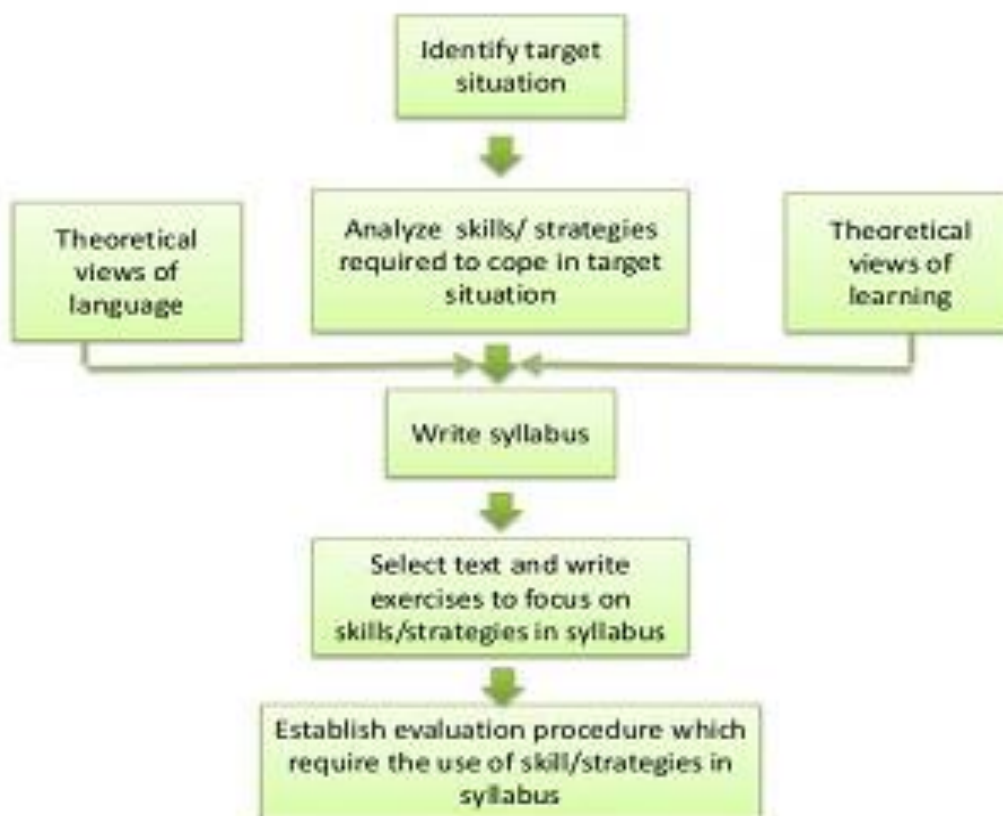
Figure 1.5: A Skills-Centred Approach to Course Design (Hutchinson and Waters, 1987, p. 71)

Even though this approach considers the learner more than the language-centred approach, it still regards him as a user of the language more than a learner of language. Thus, this leads us to introduce the third approach that is the learning centred approach, bearing in mind the distinction between the processes of language use not of language learning as Hutchinson and Waters recommend.

1.2.8.3 Learning-Centered Course Design

This approach deems the learner as the main piece of the puzzle. In other words, the main principle of this course design approach is that the learner is the most

important part of the procedure and the learner is the one who determines the process of the learning through his/her knowledge and skills to acquire new information. Hutchinson and Waters (1987) clarify by stating that " learning is seen as a process in which the learners use what knowledge or skills they have in order to make sense of the flow of new information" (P. 72)

This course design approach focuses more on the importance of the learner to the procedure in general; however, it does not, in any way, neglects the role that the target situation plays. Hutchinson and Waters (1987) assert that "... but learning can, and should, be seen in the context in which it takes place" and they add "learning is not just a mental process; it is a process of negotiation between individuals and society". To clarify, society relates to the target, which in ESP is the performance in the target situation, and individuals taking the course have to do their best to reach the target situation the course aims to. Thus, the learners are important to the process as they establish the route they want and the pace that suits them to reach the target; nevertheless, the importance of the target is not to be taken for granted. The following figure elaborates the structure of this approach's model:
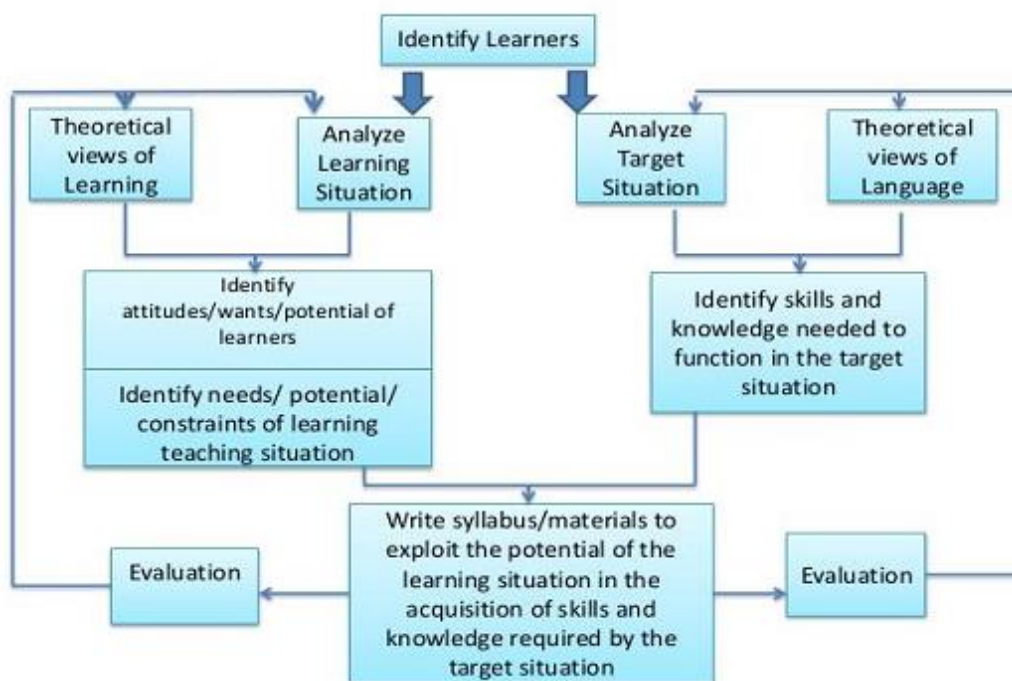
Figure 1.6: A Learning-Centred Approach to Course Design (Hutchinson and Waters, 1987, p. 74)

As we have noticed the difference between the three approaches to course design as far as the process is concerned, it is still the learners' effect on the process is what characterises each of the approaches. Hutchinson and Waters (1987) draw a conclusion on the mater stating that the skills-centred approach is too dependent on the target situation. This is in a way that it does not fully include the learner.Only to identify and analyse the target situation linguistic requirements. As for the language-centred approach, the process depends only on the analysis of target situation to determine the course content; here, there is a reference to the learner too. They elaborate different approaches' principles through the following:

- A language-centred approach says this is the nature of the target situation performance and that will determine ESP course.
- A skills-centred approach says that's not enough. We must look behind the target performance data to discover what processes enable someone to perform. Those processes will determine ESP course.
- A learning-centred approach says that's not enough either. We must look beyond the competence that enables someone to perform, because what we really want to discover is not the competence itself, but how someone acquires that competence. (p. 72)

The following diagram elaborates the relationship between the three approaches:

```
        ┌─────────────────────────┐
        │  Identify target situation │
        └─────────────────────────┘
                    │
    ────────────────┼────────────   A language-centred approach
                    │                considers the learner to here.
                    ▼
        ┌─────────────────────────┐
        │   Analyse target situation │
        └─────────────────────────┘
                    │
                    ▼
        ┌─────────────────────────┐
        │  Analyse learning situation │     A skills-centred approach
        └─────────────────────────┘        considers the learner to here.
    ─ ─ ─ ─ ─ ─ ─ ─ ┼ ─ ─ ─ ─ ─ ─
                    ▼
          ┌──────────────────┐
          │   Write syllabus  │
          └──────────────────┘
                    │
                    ▼
          ┌──────────────────┐
          │   Write materials │
          └──────────────────┘
                    │
                    ▼
          ┌──────────────────┐
          │   Teach materials │
          └──────────────────┘
                    │
                    ▼
     ┌──────────────────────────────┐
     │  Evaluate learner achievement │
     └──────────────────────────────┘
    ──────────────────────────────────   A learning-centred approach
                                          must consider the learner
                                          at every stage.
```
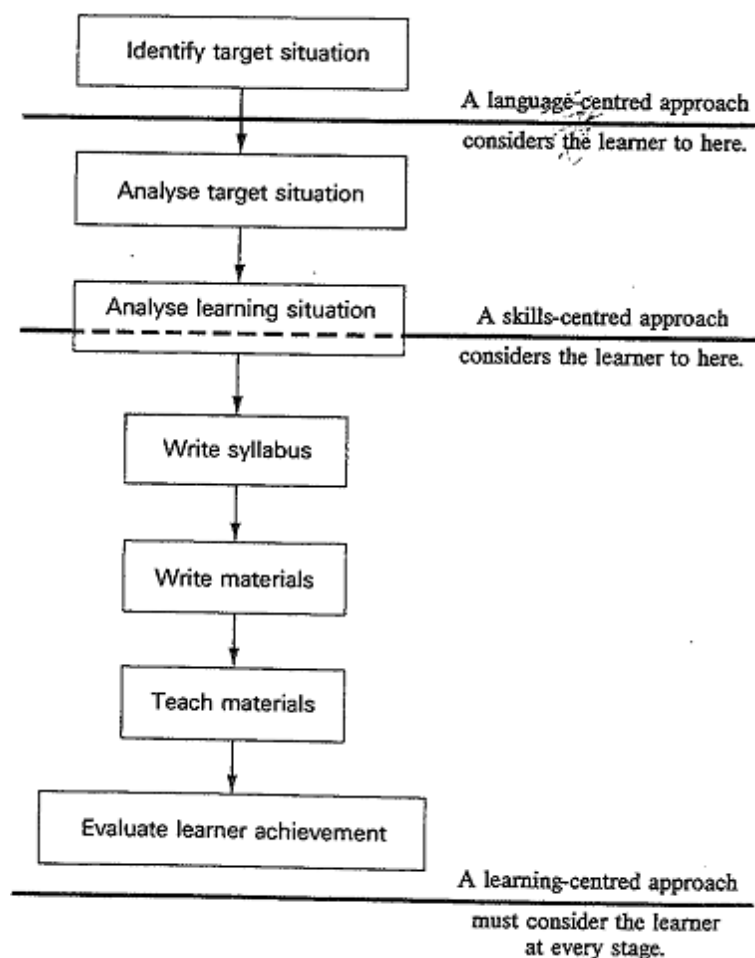
Diagram 1. 2 A Comparison of Approaches to Course Design (Hutchinson and Waters, 1987, p. 73)

From this diagram, what is important to take into account is that every single element of the process is important to the smooth flow of the procedure and for better outcomes. Besides, that each element is both influences and be influenced by others. What is crucial as well, and as far as the influence is concerned, the learning and the target situation have their influence on the nature of the syllabus, materials, methodology, and evaluation procedures as Hutchinson and Waters (1987, p. 74) state. Finally, they also claim that course design is a dynamic process and does not move linearly in any fashion. Thus, what is important is opening channels for feedback and enabling the course to develop. (*ibid*)

To sum up, an effective teaching/learning practice must take all parties into account during the course design, the importance of all the elements and giving

chance for the course to develop are fundamental for the success of the course and to reach targeted aims. Overall, ESP course design is to meet students' needs in terms of setting the ground for them to learn a set of language aspects and skills in their own field with the intention of communicating effectively within any circumstances in the target situation. The researcher applies Hutchinson and Waters' model takes into account all of this in addition to its flexibility in terms of data gathering instruments for instance. In addition, its consideration of target needs from different standpoints and allowing the designer to put a personal touch as far as the designed materials or methods are concerned.

The course designer, and in order to ensure the success of the course and reach the intended aims, must take into consideration the following characteristics of ESP course.

1.2.9 Main Characteristics of ESP Courses

Gatehouse (2001) summarises different traits of ESP courses while Carter (1983) claims that there are three main characteristics that belong to ESP course which are authentic materials, purpose-related orientation and self-direction. In the following subsections, the researcher describes these featured briefly.

1.2.9.1 Authentic Materials

The selection and implementation of authentic materials is not a simple task for course designers. This might be a result of the variation of the exact meaning of authenticity within available literature. Dudley-Evans and St. John (1997) in addition to Safont and Esteve (2004) however, recognise the authenticity of materials as a pertinent characteristic of ESP methodology.

Authentic materials, in terms of selection and use, are in direct relation to reading. Sznajder (2001) advocates that authenticity "refers not only to the form, contents and the communicative goal of a text, but also and most importantly, to the purpose of reading" (p. 390). Wegner (2008) among other scholars assert that there is a group of functions of authentic texts within ESP courses, he declares:

"First, inviting authentic materials from the learners' work
environment to the classroom the teacher offers assistance (…)
Second, the ESP teacher always looks for texts that are as close
to the learners' target situations in their jobs as possible (…)
Third, authentic texts serve as sources of information for the
teacher and may already be collected during the needs analysis
period". (P. 137)

As for the selection of materials, ESP course design is a structured process and
every single step applied must be justified. Fei and Yu-Feng (2008) propose three
criteria we should take into account while choosing materials for the course:

- firstly, readability is important for learners' comprehension. The
former scholars label it as "a combination of structural and lexical
difficulty" this might create a hurdle and lower the learners'
motivation during the session.
- Secondly, they explain that we must meet the learners' needs when
the materials chosen for reading materials especially in learning
English in academic settings.(Graia Bouklikha, 2016, p. 36)
- Thirdly, they consider learners' interest for the materials provided
as a selection criterion that is highly recommended to be deemed
in order to gain their interest in the course in general and enhance
the course's outcomes quality.

This interest aspect of the materials might be summarised in the use of
interactive ingredients, if we may say, such as pictures, photographs, chart and videos
that enhance learners' interest and motivations. Berardo (2006) admits that the use of
such materials to build a context of the text is so beneficial, attractive and thus
motivating. On the same train of thought, and as far as using the internet as a means
of education in general, Bell (2005) declares "the authenticity, immediacy, and scope
of materials now available via the web are unprecedented in history". (p. 7)

While Bocanegra-Valle (2010, p. 150) adds that the internet as an up-to-date source of materials can help "providing ESP practitioners with a diversity of 'takeaway formats' (video, audio, pictures and text)". This might be of great help for teachers to enhance the quality of their materials through updating the content and make them fit the changing needs of students.

ESP learners are mostly adults and for that reason Gulikers et al. (2005, p. 250) quotes Huang (2002) who establishes two principles that portray adults' motivation in class.

- Real-life situations help adult learners acquire language more easily especially when the content has a problem-solving orientation.

- Situations that are related to their professional lives and discussing issues related to what is expected within the target situation helps them learn new knowledge more efficiently. And this is what the researcher focused on to gain learners' interest and raise their motivation (see 6.3.3).

Overall, the following are guidelines provided by Harding (2007, p. 10) to assist ESP teachers employ and imply authentic materials:

- Think about what is needed;
- Understand the nature of your students' subject area or vocation;
- Spend time working out their language needs in relation to the subject;
- Use contexts, texts, and situations from the students' subject area;
- Exploit authentic materials that the students use in their specialism or vocation;
- Make the tasks authentic as wells as the texts;
- Motivate the students with variety, relevance, and fun;
- Try to take the classroom into the real world that the students inhabit, and bring their real world into the classroom.

To sum up, and as the researcher stated earlier, the process of selecting and implying authentic materials is as challenging as any step of ESP course design. However, these materials provide a considerable amount of help more importantly in involving learners and increasing their motivation.

1.2.9.2 Purpose-Related Orientation

As adult ESP learners, students have already oriented their educational path towards a specific target, and they project-learning English as to finalise their orientation. Additionally, they are well aware of the linguistic requirements they will need within the target situation. As a result, purpose-related orientation refers to "the stimulation of communicative tasks required for the target setting" (Graia Bouklikha, 2016, p. 38). From another perspective, Carter (1983) cites student simulation of a conference, involving the preparation of papers, reading, writing; and note taking, as examples of these practices with purpose related orientation.

These students are well aware of the linguistic requirements for the target situation as well as specific knowledge about their field of interest. This would help them identify language aspects to be on spotlight for study during the course and language skills that the teacher develops accordingly; thus, help them learn English more efficiently.

To conclude, Gatehouse (2001) believes that "there is a value in all texts, but curricular materials will unavoidably be pieced together, some borrowed and others specially designed … purpose-related orientation is an essential component of any material designed for specific purposes". (P. 10)

1.2.9.3 Self-direction

Self-direction is a reference to learners' freedom deciding when, what, and how, they will study on which they will achieve this specific characteristic of ESP course. Carter (1983) states that "… point of including self-direction … is that ESP is concerned with turning learners into users" (p. 134). What is important to note for

this characteristic of ESP courses is that learners acquire specific learning strategies satisfactory enough to acquire knowledge in the new culture.

1.2.10 Needs Analysis

Needs analysis (NA) plays an imperative role in designing every language course like ESP course or a general English course. It has been acknowledged by many scholars and researchers to be a foundation of a successful course design procedure. (Munby, 1978; Richterich and Chancerel, 1987; Hutchinson and Waters, 1987; Berwick, 1989; Brindley, 1989; Tarone and Yule, 1989; Robinson, 1991; Johns, 1991; West, 1994; Allison et al. (1994); Seedhouse, 1995; Jordan, 1997; Dudley-Evans and St. John, 1998; Iwai et al. 1999; Hamp Lyons, 2001; Finney, 2002) and others were among a large number of linguists who recognize its primal role within the whole process.

1.2.10.1 Defining Needs

The role of NA in course design is indisputable. However, an elaboration must be drawn for the term 'needs' and what it does refer to in this process. As far as the language teaching/learning ground is concerned, Brown (1995) simplifies the concept by stating that needs are students' linguistic requirements in a specific context of a particular situation that influence the general educational situation (p. 36). Thus, we can refer to needs as what learners expect to be able to perform at the end of the educational phase, or what the teacher expects from them to perform, communicatively speaking, while on their professional careers.

The term 'needs' refers differently, but in relation to the subject matter as follows:

- Brindley (1989, p. 65) – objective and subjective;
- Berwick (1989, p. 55) – perceived and felt;
- Brindley (1989, p. 63) – process-oriented and product-oriented;
- Finally Hutchinson and Waters (1987, p. 55) – necessities, lacks and wants.

The different terminology used to describe needs does not mean they refer to different concepts or perform different functions. What is important is that they all serve similar purposes that aim eventually to design a purposeful course to fulfil learners' target communicative requirements.

1.2.10.2 Needs Categorisation

According to Hutchinson and Waters (1987), needs are categorised as target needs and learning needs.

a) Target needs: we refer to them as necessities, lack and wants. They refer to the accurate comprehension and production of specific linguistic aspects required by the target situation. Accordingly, it is what learners need to do within the target situation.

- *Necessities*: they are what the learner needs to perform his/her communicative tasks successfully. Hutchinson and Waters (1987) argue that they are "what the learner has to know in order to function effectively in the target situation" (p. 55). This type of needs determines the target situation requirements.

- *Lacks*: it is vital for the success of the course design process to determine the current linguistic competence of learners they acquired through courses they have already taken. The gap between this current state of knowledge and the one they aspire to reach is what lacks represent in this respect. Therefore, identifying necessities alone will not be enough.

- *Wants*: this refers to what learners desire to learn in ESP course. It is commonly in relation to the target situation communicative requirements. In addition to what learners want to do during the session to be able to perform while being professionally operational.

b) Learning needs: this aspect is as important as target needs. Different perspectives in literature focus more on the learning needs because of the

different needs in every single field as each single one imposes its own needs, and the specific methodology and technique in meeting these needs.

Hutchinson and Waters (1987) oppose the use of target needs solely to determine the elements of course design (p. 60). Learning needs are in direct relation to learners' motivation and represent the factors that may affect the latter and hinder the thriving learning experience. Taking into account elements such as the learning environment, learning methodology and techniques, in addition to the materials used are what delineate the fulfilment of learning needs. For example, learners may lose interest and feel jaded if the applied methodology, techniques, or materials are not attractive and satisfying for them. This will affect negatively their motivation. To sum up, Mountford (1978, p. 6) states that language teaching must trail "specific learning and language use purposes of identified group of students".

1.2.11 Needs Analysis Procedure and its Importance to ESP Course Design

In every step of course design, NA process is a graded systematic procedure. Brown (1995) defines the process as a "… systematic collection and analysis of all subjective and objective information necessary to define and validate defensive curriculum processes that satisfy the language learning requirements of students within the context of particular institutions that influence the learning and teaching situation" (p. 36). From another perspective, Nunan (1987) provides a more accurate definition related to the main constituents of the process, he sees it as "... a family of procedures for gathering information about learners and about communication tasks" (p. 75).

Latest viewpoints on the matter provide more details such as Hyland's (2006) definition stating that:

> Needs analysis refers to the techniques for collecting and
> assessing information relevant to course design: it is the means
> of establishing the how and what of a course. It is a continuous
> process, since we modify our teaching as we come to learn more

about our students, and in this way it actually shades into
evaluation – the means of establishing the effectiveness of a
course.

He adds,

Needs is actually an umbrella term that embraces many aspects,
incorporating learners ' goals and backgrounds, their language
proficiencies, their reasons for taking the course, their teaching
and learning preferences, and the situations they will need to
communicate in. Needs can involve what learners know, don't
know or want to know, and can be collected and analyzed in a
variety of ways. (p. 45)

The difference between ESP models and course design approaches labelling
led to different terms used to discuss NA. Terms and expressions such as target
situation analysis, present situation analysis, pedagogic needs analysis, deficiency
analysis, strategy analysis or learning needs analysis, means analysis, register
analysis, discourse analysis, and genre Analysis are all used to label NA;
nevertheless, they all aim at meeting learners' needs saving the importance of the
procedure to the whole process of course design.

There is a notable consensus on the importance of needs analysis procedure
as a major part of ESP course design. Which, on the same train of thought has gained
the recognition of numerous scholars and researchers such as (Munby, 1978;
Richterich and Chancerel, 1987; Hutchinson and Waters, 1987; Berwick, 1989;
Brindley, 1989;; Robinson, 1991; Johns, 1991; West, 1994;; Jordan, 1997; Dudley-
Evans and St. John, 1998; Iwai et al. 1999; Finney, 2002).

The following figure summarises the significance of needs analysis to ESP
course development or adaptation process:
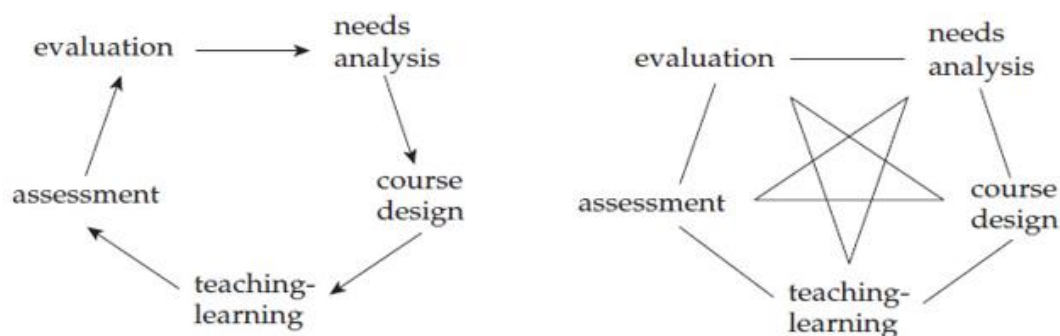
Figure 1.7: ESP Process Stages between Theory (left) and Reality (right) (Dudley-Evans and St. John, 1998, p. 12

Dudley-Evans and St. John (1998) explain the process to be interdependent set of activities as shown on the right side of the figure. These activities overlap during ESP course development or adaptation process. This also shows the importance of NA to ESP course progress as a whole and its effect on every other element of the process. The importance of NA leads us to think of the purposes of this procedure. Richards (2001) mentions a number of purposes as follows:

- To find out what language skills a learner needs in order to perform a particular role, such as sales manager, tour guide or university student;
- To help determine if an existing course adequately addresses the needs of potential students;
- To determine which students from a group are most in need of training in particular language skills;
- To identify a change of direction that people in a reference group feel is important;
- To identify a gap between what students are able to do and what they need to be able to do;
- To collect information about a particular problem learners are experiencing. (p. 52)

Needs analysis as a structured set of activities is vital to ESP course adaptation. The importance link to the effect of NA on other elements of the process as shown on the figure (1.7). The accurate application of needs analysis helps developing a more focused course that serves learners and target situation language requirements.

In relation to the teaching methodologies, the lexical approach focuses more on the use of prefabricated chunks of language without neglecting grammar since the latter has less importance in most ESP courses. David Wilkins asserts in many occasions "without grammar little can be conveyed; without vocabulary nothing can be conveyed". The following section introduces the lexical approach and its relation to ESP.

1.3 Aviation English and ESP

English as a lingua franca is widespread by becoming the linguistic requirement in most international job markets. In aviation like in any other field or business, English language certificates are necessary for employment; and furthermore, for renewing licences in this field (ex: piloting licence) by sitting for globally recognised tests, especially for pilots and air traffic controllers. In other words, "English has been generally accepted as a de facto medium of communication as a result of long time usage in this industry" (Aiguo, 2007, p. 122). As a result, Aviation English calls for a specific ESP course, with an accurately designed content and methodology, In addition to the different contextual terminology; since as far as teaching/learning aims, ESP courses in general and Aviation English as a sub-division in particular have different targets, contexts, and content.

1.3.1 Setting a Background Basis for Aviation English into ESP

Aviation English is a broad field of study, research, and practice. It is in accordance as a subdivision of the broader set of aviation. Nowadays, this vast field consists of aviation phraseology, plain English, and general English. Each has a different degree of strictness and specialisation. The phraseology is a very strict and limited set of lexical items. It is used exclusively and solely to operate within routine aeronautical situation. However, plain English is more flexible and it may include more of general English expression to serve several language functions to provide more information for the receiver. Finally, General English occurs when both former

sets of language fail to fulfil communicative functions most notably in non-routine situations such as incidents and accidents.

Even though we mostly focus on pilots and ATC communication, aviation English concerns other professionals in the field as stated earlier to perform a number of communicative functions. For example the speech used by pilots for briefings, and flight deck communication; speech used by maintenance technicians (engineers/mechanics), flight attendants/stewards, dispatchers, announcements, or managers and officials within the aviation industry. All of these language functions and specifications require a specific teaching method, content, and arrangements.

Mackay and Mountford (1978) state that:

> The language of international air-traffic control could be
> regarded as ''special'', in the sense that the repertoire required
> by the controller is strictly limited and can be accurately
> determined situationally , as might be the linguistic need s of a
> dining room waiter or airhostess . However, such restricted
> repertoires are not languages, just as a tourist phrase book is not
> grammar. Knowing a restricted ''language' ' would not allow the
> speaker to communicate effectively in a novel situation, or in
> con texts outside the vocational environment. (P. 4–5)

On the same breath, and according to the former scholars' statement, Aviation English can evidently be a subset of ESP, equally ranked as English for Science and Technology, English for Business and Economics, and English for Social Sciences (Aiguo, 2008).

Douglas (2000, cited in Mekkaoui, 2013, p. 10) stipulates that English for International Aviation is not English for general purposes or English for international purposes. Aviation English is a language for specific purposes. Thus, this promises that aviation English is a subset of ESP because of its vast lexical selections that serve different purposes in a specific contexts and target situations that require an endorsed teaching content and methodology.

1.3.2 Aviation English as a Requirement of Integration

The aviation industry is growing on a steady basis in our country. As far as globalisation is concerned, and as English is a means of integration to the new world, the industry requires different aviation professionals to have a good command of the language for a better communication with their foreign counterparts and most importantly to ensure different flight phases safety. Different aviation professionals like (pilots, air traffic controllers -tower/area/and ground controllers-, cabin attendants, crew members, aeronautics engineers, and service staff); are all required to have a certain degree of English language mastery in addition to a good command of their aviation English, to provide a better service and guarantee the success of their careers and the whole business. The succession stated earlier is a result of good grasp and practical skills of the English language in addition to their professional knowledge.

1.3.3 A Historical Overview of the ICAO

In the recent years, the aviation industry has been growing steadily and increasingly as one of the safest and most luxurious means of transportation. Airplanesare the only transportation means that ensure reaching long destinations in shorter periods. Nowadays, it is more organised, and millions of professionals have joined this field being a successful business operated by several global organisations and agencies.

The International Civil Aviation Organisation (ICAO) came to existence on December the 4th, 1944 following the Chicago Convention (The signing of the Convention of International Civil Aviation by 52 member states). Ensuring safety, efficiency, progress, and cooperation in civil aviation are the main focuses and objectives of the agency. Currently, the ICAO consists of 191 member states in collaboration with several organisations and groups that work on ensuring the compliance with Standard and Recommended Practices (SARPs) for civil aviation. The management of more than 100 000 worldwide flights on a daily basis is what the SARPs stand for through the ICAO members, throughout not only traffic

management or personal licensing of aviation professionals, but also in the course of aviation communication and the use of aviation language.

Because of the fast growth of international aviation operations, Aviation English as a lingua franca became crucial for aeronautical communications. Up until 2003, there has been only two Recommended Practices and one standard, in Annexes 10 and 01 respectively, dealing with the use of the English language as a means of communication in aviation speech. Both points discussed as following:

a) The Recommended Practices state that "the air-ground radiotelephony communications shall be conducted in the language normally used by the station on the ground or in the English language" (ICAO, Annex 10 2: 5.2.1.2.1);

b) and that "the English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes by international air services" (ICAO, Annex 10 2: 5.2.1.2.2)

ICAO (Doc 9835 1.3.1) states that the Annex 1 did only address the air traffic controllers to speak the language or languages that are used on a national scope for air/ground communication without any difficulty or interference that may negatively affect the communication. Thus, the commendation neither did include the flight crew nor specified the required proficiency language level.

- **Explaining the Linguistic Requirements Set by the ICAO**

The ICAO has set a six holistic descriptors chart on which ESP assessors rely to evaluate the language proficiency of test-takers, i.e. novice or experienced aeronautics professionals. These descriptors determine the test-taker's level based on six different levels as table 1.1 below shows:

ENGLISH FOR AVIATION LANGUAGE TESTING SYSTEM

Appendix A: ICAO Holistic Descriptors and Language Proficiency Rating Scale

ICAO Holistic Descriptors of operational language proficiency (*Appendix to Annex 1 of the Convention on International Civil Aviation*)

Proficient speakers shall:
1. communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face situations;
2. communicate on common, concrete and work-related topics with accuracy and clarity;
3. 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;
4. handle successfully and with relative ease the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine work situation or communicative task with which they are otherwise familiar; and
5. use a dialect or accent which is intelligible to the aeronautical community.

ICAO Language Proficiency Rating Scale (*Attachment to Annex 1 of the Convention on International Civil Aviation*)

Level	Pronunciation	Structure	Vocabulary	Fluency	Comprehension	Interaction
	Assumes a dialect and/or accent intelligible to the aeronautical community	Relevant grammatical structures and sentence patterns are determined by language functions appropriate to the task				
Expert Level 6	Pronunciation, stress, rhythm and intonation, though possibly influenced by the first language or regional variation, almost never interfere with understanding.	Both basic and complex structures are consistently well controlled.	Vocabulary range and accuracy are sufficient to communicate effectively on a wide range of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced and sensitive to register.	Able to speak at length with a natural effortless flow. Varies speech flow for stylistic effect, e.g. to emphasise a point. Uses appropriate discourse markers and connectors spontaneously.	Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.	Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues, and responds to them appropriately.
Extended Level 5	Pronunciation, stress, rhythm and intonation, though influenced by the first language or regional variation, rarely interfere with understanding.	Basic grammatical structures and sentence patterns are consistently well controlled. Complex structures are attempted but with errors which sometimes interfere with meaning.	Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete and work related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Able to speak at length with relative ease on familiar topics, but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers and connectors.	Comprehension is accurate on common, concrete and work related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Responses are immediate, appropriate and informative. Manages the speaker/listener relationship effectively.
Operational Level 4	Pronunciation, stress, rhythm and intonation, though influenced by the first language or regional variation, only sometimes interfere with understanding.	Basic grammatical structures and sentence patterns are used creatively and are usually well controlled. Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.	Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete and work related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	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 listeners. 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.	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.
Pre-Operational Level 3	Pronunciation, stress, rhythm and intonation are influenced by the first language or regional variation and frequently interfere with understanding.	Basic grammatical structures and sentence patterns associated with predictable situations are not always well controlled. Errors frequently interfere with meaning.	Vocabulary range and accuracy are often sufficient to communicate effectively on common, concrete and work related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Comprehension is often accurate on common, concrete and work related topics when the accent or variety used is sufficiently intelligible for an international community of listeners. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Responses are sometimes immediate, appropriate and informative. Can initiate and maintain exchanges with reasonable ease on familiar topics and in predictable situations. Generally inadequate when dealing with an unexpected turn of events.
Elementary Level 2	Pronunciation, stress, rhythm and intonation are heavily influenced by the first language or regional variation and usually interfere with understanding.	Shows only limited control of a few simple memorized grammatical structures and sentence patterns.	Limited vocabulary range consisting only of isolated words and memorized phrases.	Can produce very short, isolated, memorized utterances with frequent pausing and a distracting use of fillers to search for expressions and to articulate less familiar words.	Comprehension is limited to isolated, memorized phrases when they are carefully and slowly articulated.	Response time is slow and often inappropriate. Interaction is limited to simple routine exchanges.
Pre-Elementary Level 1	Performs at a level below the elementary level.	Performs at a level below the elementary level.	Performs at a level below the elementary level.	Performs at a level below the elementary level.	Performs at a level below the elementary level.	Performs at a level below the elementary level.

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Table 1.1: ICAO Holistic Descriptors and Language Proficiency Rating Scale (ICAO Document 9835, 2010)

The rating scale consists of six levels starting by Pre-Elementary Level 1 to Expert Level 6. These levels are determined by six holistic descriptors the assessor follows to put the test-taker's language proficiency final grade. Learners or professionals who take the test and end up with pre-elementary level 1, elementary level 2 or pre-operational level 3 will not have the chance to be hired or offered a contract renewal, i.e. they will not be operational and will have to take the test once again. However, test-takers who get operational-level 4, extended level 5 or expert level 6, will have the chance to be operational with a difference in the certificate validity period between three years, six years respectively, and a permanent certificate for expert level 6 holders.

The designed ICAO holistic descriptors and language proficiency rating scale takes into account the accurate understanding of the messages sent and received by aviation professionals. However, each descriptor takes into account specific language aspects related to the descriptor in question and they are as follows:

- *Pronunciation:* this descriptor takes into account the speaker's native tongue interference in terms of stress, rhythm and intonation and the degree of effect on the ease of understanding.

- *Structure:* basic grammatical structures need to be well controlled as well as sentence patterns. However, errors must not interfere with the meaning. Complex structures also take place alongside the accurate language function according to the task but only on advanced levels such as expert level 6.

- *Vocabulary:* what is important here is the range and accuracy of used vocabulary, more specifically, the accurate use on common, concrete and work related topics. In addition, it is necessary for novice pilots and ATCs to enlarge their vocabulary vessels to cover a wider range of topics in order to be able to deal with unusual circumstances (see 1.5). Higher levels of proficiency require successful and consistent paraphrasing in addition to an idiomatic vocabulary.

- *Fluency:* effective communication is mostly defined by the production of stretches of language at an appropriate tempo, the loss of fluency when shifting from rehearsed speech, i.e. aviation phraseology to spontaneous interaction is tolerable as long as it does not affect the quality of the information. It is necessary for aeronautics professionals to have a good control over the use of connectors and discourse markers to ensure a fluent speech and a smooth flow of information.

- *Comprehension:* it is a necessity for aeronautics professionals to have an accurate comprehension of common, concrete and work related topics as far as the variety or the accent is intelligible to the international community in this field. Furthermore, it is highly required for novice pilots and ATCs to be able to comprehend a range of speech varieties and registers especially in unexpected turn of events.

- *Interaction:* time allocated to message delivery and reception is a major factor in ensuring the safety of the flight. Thus, novice aviation professionals need to have immediate, appropriate and informative responses. More importantly, they need to maintain the flow of the information exchange especially when dealing with unexpected turn of events by checking, clarifying and confirming until the communication is satisfactory for both ends.

To sum up, to be proficient pilots and ATCs need to communicate effectively in voice only communication, i.e. radiotelephony. The accuracy and the clarity of common, concrete and work related topics information is highly required. As accuracy is focused on repeatedly, aviation professionals need to use checking, clarifying and confirming as communicative strategies to resolve any misunderstanding or unexpected turn of events where linguistic challenges occur. Finally, it is worth mentioning that Operational Level 4 determines basic necessities

for novice pilots and ATCs to be operational while on target situation, i.e. radiotelephony communication.

1.4 The Linguistic Reforms Stated by the ICAO

After the different catastrophes in the aviation industry caused by the breakdown of communication, the ICAO has set reforms to minimise the degree of failures and losses related to this field. At this stage, the Assembly in its 32nd session resolution (A32-16) has proposed for the first time the minimal language requirements for -air traffic control- personnel (ATCs) and flight crews (pilots) and thus the Proficiency Requirements in Common English Study Group (PRICESG). The main concern of this study group was to generate a set of standardised English language testing requirements and processes based on the current condition of Air-Ground and Ground-Ground vocal communication in international civil aviation. Finally, to raise minimum language skills levels requirements in aviation English (ICAO, Doc 9835 1.4.3).

As of March 5th, 2008, the Assembly has created the Amendment 164 to add to Annex 1 (Personal Licensing). The content of this document states that aviation professionals (basically pilots and air traffic controllers) are asked to prove their English language proficiency reaching at least the Operational Level 4 based on the ICAO Language Proficiency Rating Scale (LPRS) (see table1.1). This rating scale has a base of six different aspects of language labelled as Holistic Descriptors published firstly in (ICAO, Annex 1 1.2.9) as follows: Vocabulary, Structure, Pronunciation, Fluency, Comprehension, and Interaction. It must be stated that candidates who do not achieve the minimum level of proficiency (*Operational Level 4*) would not be able to be licensed (hired to be functional in a certain company), (Institute of Air Navigation System) or to renew his/her license (to keep being functional at his/her company).

The last discussed item, renewing professionals' licenses is similar to getting a licence for the first time as far as the English language proficiency test is concerned. That is to say, every pilot or ATC has to take the test again after a certain period if

s/he did not reach *Expert Level 6*. Candidates who reach the expert level will have a permanent certificate for the English Language Proficiency level allowing them to pursue their career without having to sit for the test ever again. On the other hand, candidates who achieve *Extended Level 5* must sit for the test once again after six years of function. Finally, candidates who reach *Operational Level 4* for their check have to take the test again after three years of work. Aeronautics professionals who get lower grading (Pre-Operational Level 3, Elementary Level 2, and Pre-Elementary Level one) would not be able to have a job, operational, or renew their licenses (See table 1.1).

1.4.1 Phraseology and Plain English in Aviation

In the 1950s, phraseology in general used to refer to as structural patterns; nowadays, and according to Ellis (2008), it refers to "constructions" and "phraseologisms". He defines the first as a term used in cognitive linguistic circles as form-meaning mappings, setting as conventionalised speech in the community and embedded in the learner's mind as language knowledge (*ibid*). In other words, it is the relation of the morphological, syntactic, and lexical form, to the semantic, pragmatic, and discourse functions (Croft, 2001; Goldberg, 1995, 2003, 2006).

On the other hand, the term "Phraseologisms" is from a corpus linguistics perspective. Based on the work of Gries (in press) and Howarth (1998a); Ellis (2008) believes that in addition to the properties stated earlier for "constructions"; phraseologism holds a statistical nature as "the co-occurrence of a lexical item and one or more additional linguistic elements. Which they function as one semantic unit in a clause or a sentence and whose frequency of co-occurrence is larger than expected on the basis of chance". (P. 2)

1.4.2Phraseology in Aviation

Aviation phraseology is characterised as a rigid subset of the English language. It is highly specialised, structured, and constricted. Aeronautics professionals use Aviation phraseology to meet a limited set of communicative functions that are in a

direct link to common, concrete, and work related topics for routine situations only. Here are some definitions of phraseology according to subject specialists and language specialists as well. Hazrati (2015) explains that the language used for air communication among both Air Traffic Controllers and Pilots is not a standard variety of English Language and has a highly specialised syntax, which we call 'Phraseology'.

However, Li (2016) adds, "Phraseology is used in routine situations by both native and non-native speakers with the goal of clarity and comprehension by very, and is regarded as English for Special Purpose" (p. 11). Both of these definitions show the importance of phraseology in limitation as to help interlocutors communicate effectively is short periods. However, Phraseology is a limited part of language that serves specific functions only. Basturkmen and Elder (2004) assert that phraseology in aviation is "meant to cover all routine situations. It is an example of a language for specific purposes (LSP), in other words a language that is used in constrained and predictable ways for a limited range of communicative events" (cited in Mekkaoui, 2013, p. 10).

Also, Stephany (2011) alongside Showcross (2011) both believe that phraseology covers only the most common routine situations encountered in air navigation. As a result, aviation phraseology is highly limited and cannot fulfil all communicative needs in aviation communication; thus, plain English comes as both a requirement and a solution to communicate effectively most notably in non-routine situations.

1.4.3 Plain English

Since aviation phraseology does not suffice for total successful and safe message delivery and reception, plain English came to the existence not only in the form of a recommendation but also as a linguistic requirement for flights' safety by the ICAO. ICAO (2004) is defined as:

> Spontaneous, creative and no coded use of a given natural
> language, although constrained by the functions and topics
> (aviation and non-aviation) that are required by aeronautical

radiotelephony communications, as well as by specific safety-critical requirements for intelligibility, directness, appropriacy, non-ambiguity and concision. (P. 14)

Plain English cannot replace phraseology; to be more specific, Morrow et al., (1994) and Howard (2008) when a problem occurs in a communication and there is a chance for communication breakdown, plain English is favoured by addressers and addressees to confirm what they understand, and/or if they are understood perfectly. Therefore, they use plain English when it can cover the situation and fulfil the communicative function properly, but cannot replace phraseology. The following diagram represents the relationship between phraseology and natural language, in addition to where plain English stands.

Diagram 1. 3: Complex Relationship with Phraseology and Natural Language (Stephany, 2011, p. 26)

On the other hand, the use of plain English can create communicative issues just as phraseology does. Morrow et al., (1994) elaborate, "because of their tendency to use 'more complex syntax, vague or non-standard terminology' plain English, in other words, is not very plain" (p. 253-254).

As stated earlier concerning creativity as one of the characteristics of plain English, it should be borne in mind that even if plain English is less constrained than phraseology, it is still not that natural like everyday speech. Stephany (2011) confirms "plain English is less restricted than phraseology but not as natural as everyday speech" (p. 26).

Figure 1.8: Aviation English Users (adapted from Mekkaoui, 2013, p. 13)

As the figure shows, the focus of most aviation English researches is on radiotelephony communication using phraseology and plain English between pilots and Air Traffic Controllers. However, Aiguo (2008) relates that aviation English is

> Not restricted to controller and pilot communications, aviation English can also include the use of English relating to any other aspect of aviation: the language needed by pilot s for briefings, announcement s, and flight deck communication; language used by maintenance technicians, flight attendants, dispatchers, or managers and officials within the aviation industry. Aviation English includes but must not be limited to International Civil Aviation Organization (ICAO) phraseology and can require the use of general English at times. (P. 23)

Thus, the researcher must state that there are other participants concerned with aviation English in general such as cabin crew (airhostesses), engineers, and maintenance crew... etc. To sum up, Campbell-Laird (2004) states and in reference

to Avianca flight catastrophe that we mentioned in (Table: 3.1), that plain English plays a major role in avoiding such fatal accidents. While Pinzo and Hendrix (2008) insist on the ICAO language requirements and that both phraseology and plain English are necessary for ensuring flights' safety and avoid any communication-related catastrophes.

1.5 English for Ensuring Flight Safety

Aviation English is the language used for any aeronautical communication between field professionals who do not share the same linguistic background. This language occurs in both routine/ day-by-day aviation operations and for unusual circumstances like incidents and accidents.

Borowska (2016) believes that "communication is one of the cornerstones of air traffic system. Aviation personnel's communication errors are very often a cause of many incidents and accidents" (p. 61). In other words, a successful communication and avoiding any kind of breakdown of communication is compulsory for the safety of every flight. Stewart (1989) describes the "human errors", communication errors included, describes them as a result of bad habits that had been formed over time (p. 38). Both researchers focused in their studies on the fact that these human factors, worth notably communication errors, can be behaviour of not only (NNS) non-native speakers, but native speakers of English as well.

Since we have cleared the idea of communication as a basic element in ensuring flight safety, it is urgent to not only discuss the matter but also to find solutions and avoid any critical mishaps in the near future. Borowska (2016) offers a set of strategies to help ensure a safer flight as far as communication is concerned, to make native speaker aeronautical professionals to familiarise themselves with the challenges faced by NNS. She refers to the following:

- Learning strategies to improve cross-cultural communications
- Refraining from the use of idioms, colloquialisms, and other jargon
- Modulating the rate of delivery

- Making sure there is not too much information in a single transmission. (Rees, 2013, p. 102, cited in Borowska, 2016, p. 63)

Apart from the modulation of the rate of message delivery and the amount of information in a single delivery, which we discuss repeatedly, the use of formulaic expressions that hold a situation bound, contextually related, and culturally characterised has not been given enough research and discussion. Borowska is trying to refrain the use formulaicity (idioms, collocations...) by native speakers. The researcher believes that it is quite a challenge for the simple fact that, in non-routine situations such as incidents and accidents, aviation professionals and especially pilots cannot always keep calm. Moreover, the nature of the critical situation in addition to the feelings related to the situation (anxiety, confusion ...) cannot help pilots refrain from using formulaic sequences in their plain English. However, Borowska believes that her study and our research can have a meeting point and reach a consensus by working from both sides (NS and NNS), to raise the awareness of the first and improve the language training of the second in order to guarantee, to a certain degree, the safety of flights.

In the same vein, and as English has developed to be the language used in NNS-NNS interactions and be called a "lingua franca communication" (House, 2010, p. 363); the researcher believes that the deductions stated in this section apply on both advanced NNS and NS. This is a result of what the researcher noticed while providing tests for pilots and analysing test records of Algerian pilots, who sat for the test in this period. A few number of advanced test takers noticed by the investigator, one in particular who lives in Canada, had a good control over language in both aviation phraseology and plain English. However, and since this test encourages discussion between both test takers (EALTS paired tests, see: 6.5), the second was not a competent language user, and the comfortable use and even (the show off) of the competent test taker reflected negatively on the second candidate. Thus, the researcher opts to shed light on this matter for the same reasons he did for native speakers.
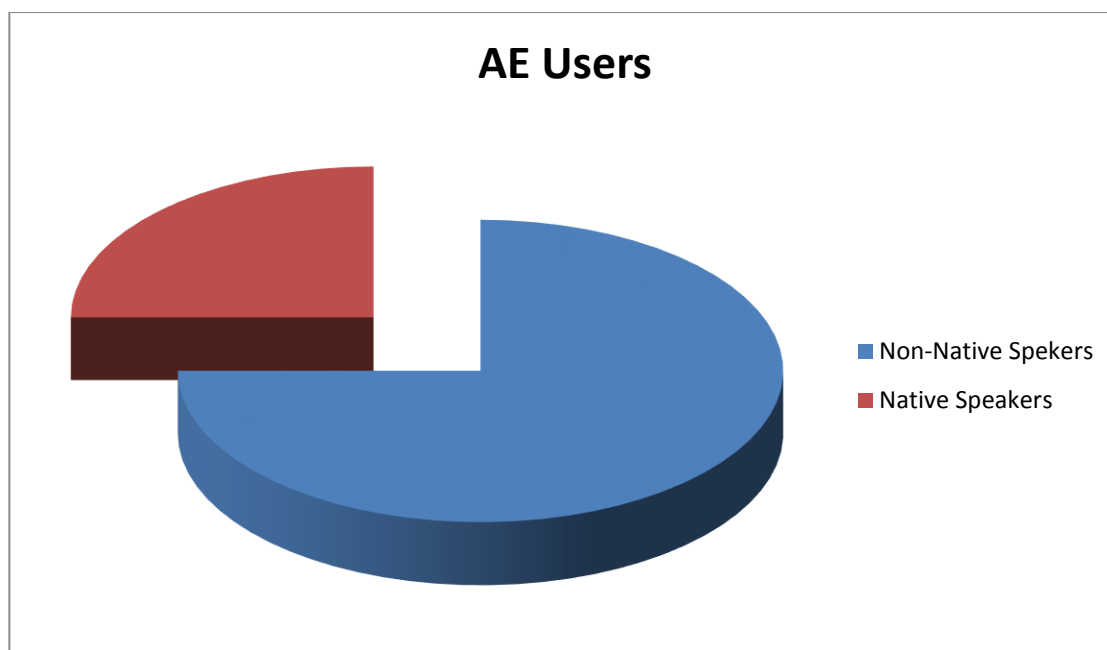
Figure 1.9: Aviation English Users

To sum up, only 25% of aviation professionals are native speakers; and this, stresses the fact that aviation English is firstly and an international language and NS are just a minority (Borowska, 2016). As a result, the researcher believes that both researches on both sides are complementary and all aviation and language professionals should cope to come up with solutions and ensure safety in international flights.

1.6 Native and Non-Native Speakers Communicative Challenges on Radiotelephony

Radiotelephony is the only means of communication in aviation and particularly in pilot/ATC operational communication. According to Nitayaphorn (2014), radiotelephony is a universal language used particularly is Air-Ground communication. In other words, it is restricted to a specific environment where pilots and ATCs are the only interlocutors.

1.6.1 Aviation English Training for Natives and Non Natives Speakers

In this study, the researcher focuses more on the acquisition and memorisation of formulaic sequences as a part of both phraseology and plain English since, as far as this study is concerned, and in relation to the ICAO language requirements, are equally important to successful radiotelephony communications. Borowska (2016) an aviation English expert, belongs to the first group which takes non-native speakers' side, she implements that native speakers should be trained to avoid breakdown of communications and she states

> After the analysis of training needs has been done, the objective is to not only make ES (expert speakers/ NS) aware of their linguistic behaviour, but also suggest useful ways of dealing with communication breakdowns by taking necessary actions during aeronautical (specifically pilot/controller) communication.

She adds,

> Such training does not aim at teaching them a language, but rather to train their communicative competence. It can be conducted as a set of workshops based on interaction, but NS should not interact with themselves during such practice. Moreover, it is recommended their instructor should also be a NNS in order to increase communication manipulation chances. (P. 67)

ICAO requirements state, "The burden of improving radiotelephony communications should be shared by native and non-native speakers" (Doc 9835, 2010). Thus, the answer is that the success of radiotelephony communication requires everyone's contribution and a thriving collaboration between NS and NNS in the form of compromising linguistically to solve operational problems.

1.6.2 Linguistic and Communicative Challenges Faced by NNS on Radiotelephony

According to the ICAO, Level 4 operational is satisfactory for aeronautics professionals to perform their duties with efficacy. Among other experts, Wegler (2016) believes that Level 4 proficiency is sufficient for day-to-day operations, it is far from certain that the vocabulary and fluency it offers is enough to communicate clearly and concisely when things go wrong in an unexpected way. However, and in order to have an operational level (See table 1.1) NNS have to fulfil certain linguistic criteria. These criteria, sometimes, present a problem for NNS to fulfil. Mekkaoui (2013) suggests the following: Code switching, L1 interference, lexical ambiguity and paralinguistic features to be the major source of communicative challenges.

As far as this research is concerned, lexical ambiguities are seen to be the most important factor affecting negatively the quality and success of radiotelephony communication. Because of static noise and the poor sound quality of the radio, listening comprehension might be compromised and serious consequences or unexpected turn of events might occur. As an example, the words (two/to) – (right/write) and (missed/mist). NNS should be able to ask for clarifications and have contextual proficiency to understand the accurate meaning; however, this might not be enough too. To clarify, Cushing (1994) reports an example of misunderstanding because of the phonological similarity between "two" and "to", this has almost led to an air collision when the pilot misinterpreted the instruction "climb two five zero" as "climb to five zero".

What is more important for the researcher in this study is the misunderstanding of expressions that hold a specific degree of figurativeness. Moreover, they are characterised with their holistic nature of acquisition and use (formulaic sequences). The ICAO Manual (2004) states two examples:

- Go ahead --- means (forward motion/ urge speaking);
- Stand by --- means (wait/ standing)

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Another example that may be serious when misinterpreted is the expression "keep your speed up". When an air traffic controller advices the pilot to "keep the speed up" s/he means, "Maintain speed" in aviation English. However, there might be misunderstanding by the NNS by noticing the word (up) and interpreting the expression to mean "increase speed" which may lead to unfortunate circumstances.

1.7 Conclusion

This chapter introduces the field and case study. State of the art information on both ESP as the area of research and aviation English as the main interest of the research. As a theoretical chapter, the researcher focuses more on the quality of the data provided and the updated resources relied on.

The first section introduces ESP and discusses the process of course adaptation and evaluation from different perspectives. Additionally, the researcher presents the followed model and tries to provide convincing arguments for his choice. A background study explains as well in this section, different steps followed in ESP course adaptation and evaluation. In addition, the researcher puts a theoretical viewpoint and literature support for different approaches, methods, and techniques related to ESP course design and employed during this research.

The second section follows the last part of the first section discussing Aviation English in relation to ESP. In addition, it discusses the state of aviation English in Algeria and Aures Aviation Academy as a provider of language trainings and assessments in the country. The researcher in this section tries to shed light on aviation English in the workplace (cockpit). The difference in perception between NS and NNS as far as communication in aviation English is concerned (both phraseology and plain English), and ultimately, focuses more on the factors affecting misunderstanding on radiotelephony and more importantly the role of formulaic sequences in minimising the misinterpretation and ensuring successful communication between pilots and ATCs.

CHAPTER TWO: Formulaic Language and Communicative Competence

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2.1 Introduction

Formulaic language has attracted researchers' attention through its overgrowing development and influence on vital aspects of foreign language learning. Generally, linguists tend to create and develop methods and materials to enhance the efficiency and the quality of the teaching/learning experience. Nowadays, formulaic language plays an important role in the process of, not only English language learning, but also all languages. The importance of formulaicity on the foreign language learning process; primarily English in our case, lays first on the considerable number of prefabricated chunks in this language. As well as The holistic cognitive processing of these formulae that is "easier" than generating single words for communication, and finally the direct positive influence of formulaicity on communicative competence, fluency, pragmatic skills, and reaching a native-like language proficiency.

2.2 Formulaic Language- a Historical Overview

Through a couple of decades of researching formulaic language acquisition, memorisation, use, and identification, scholars still investigating this phenomenon and with an increasing rate of production throughout articles, books, and conference papers. The outcomes of these investigations are very encouraging for further research to set the pillars of formulaic language as a promising field of study.

Wood (2015) provides a collection of worthy studies that shape the current state of formulaic language, he states that "the real source of information about formulaic language has been a range of books, both edited collections and monographs, about it over the past fifteen to twenty years" (p. 2).

He mentioned:

- Sinclair's (1991) Corpus, Concordance, Collocation was a landmark,
- Nattinger and DeCarrico's (1992) Lexical Phrases and Language Teaching;

- Cowie's (1998) Phraseology: Theory, Analysis, and Applications;
- Wray's (2002) Formulaic Language and the Lexicon and Formulaic Language: Pushing the Boundaries (2008);
- Allerton, Nesselhauf, and Skandera's (2004) Phraseological Units: Basic Concepts and Their Applications;
- Schmitt's (2004) Formulaic Sequences: Acquisition, Processing and Use;
- Granger and Meunier's (2008) Phraseology: An Interdisciplinary Perspective;
- And Wood's (2010b) Perspectives on Formulaic Language.

Within one part of this chapter, or even in the whole dissertation, it is quite impossible to discuss the myriad researches conducted on formulaic language. However, the works mentioned above stand as the leading papers on modern formulaic language, and they provide novice researchers with countless data on different perspectives on formulaicity.

Wood (2015) believes that the turning point of formulaic language research was between the 1970 and the 1980s when structural linguists paid attention to this research area for the first time. Moreover, it was the same time that witnessed the relative switch from grammar translation method to the communicative approach, from accuracy to fluency, from linguistic competence to communicative competence, and finally from teacher-centred to learner-centred instruction. (Hymes, 1981; Breen and Candlin, 1980; Barnhouse, 1981; Harvey, 1985)

Research on this field evolves continuously. As a sign of its progressive growth, researchers conduct studies from diverse areas of interest in relation to formulaicity "from literary studies and anthropologists and educational psychologists to neurologists and experimental psychologists, to language teaching methodologists and lexicographers". (Wood, 2015; p. 4)

2.2.1Before the 70s

Wood describes the period before the 70s as the era of scant attention towards formulaic language. Even though the technology that helps conducting extensive corpus analysis/research did not exist, scholars from different fields of study were carrying out a substantial amount of research. In the late 50s, as an example, Firth provided the ground of modern research on collocations with his basic definition.it states that collocations are a result of a proximal co-occurrence of words with countable types of variation (the researcher does not provide deeper details as they are related to literary studies, and that is quite distant from the current research's scope). Halliday specified accurately the notion of collocating as he focuses more on the function of a frequency of a combination that appears in a certain lexical context in comparison to its frequency in a whole language. Pawley (2007) delineates eight research tradition on which investigators nowadays set their researches upon as a solid groundwork. In the same vein, we may notice on the following part the shift of focus from the pure literary research related to formulaicity, to more scientific studies and applied linguistics.

The beginning was with epic sung poetry by Parry (1928, 1930, 1932; cited in Wood, 2015). During his studies on different works of art like Homer's, he found out that, formulaic sequences fulfilled two functions simultaneously, creative variation and a more fluent, rhythmic and smooth performance. Anthropologists and folklorists had their share of dealing with formulaicity as Hymes' (1962) work on "the ethnography of speaking" that spotlighted the performance routines and <u>recurrent</u> patterns in general daily speech. The emergence of conversation analysis as a field in linguistics came after the growing interest in studying routine utterances to achieve different speech acts and discourse functions by philosophers and sociologists. In addition to the work of neurologists and neuropsychologists in studying the damage of the left hemisphere and its effect on memorising propositional speech. (Broca, 1960s) learning psychologists like Goldman-Eisler (late 1960s), in her book "*Psycholinguistics: Experiments in Spontaneous Speech*" was among the first who related formulaic sequences to language fluency; in addition

to the assistance these sequences can provide assistance in saving mental effort and lessen generating strings of single words in favour of proficient speech.

Finally, grammarians as well had a hand in the emergence and growth of formulaic language research by focusing more on the classification of formulae, adding the structure of idioms as an example in the works of Chafe (1968) and Fraser (1970).

2.2.2 After the 70s

The period that came after the 1970s was flourishing for formulaic language research because of the growth of studies on lexicography, speech acts, and pragmatics. More importantly, what made this epoch very special were the first attempts of forming an accurate definition of formulaic language; also, the consensus on the idea that those formulae are stored and retrieved often as wholes to fulfil the communicative needs in terms of meaning and function. At length, according to Wood (2015, p. 8) "Pawly and Syder in 1983 published a landmark paper pointing out that formulaic language is likely key to second language fluency and native like selection— the tendency we have to use routine ways of expressing things, despite the supposed infinite potential of language". Thus, reaching a native like proficiency is achievable through formulaicity.

Within the same period, there was an increasing interest in oral-formulaic genre for their large number of formulae included. Auctioneers "rapid-fire" speech as described by Wood on Kuiper's (1996) work, that is an interesting example because they are so formulaic that every utterance in their speech routines is a specific chunk of language (a formulaic sequence). The latter has raised questions on the actual identification of formulas within texts or oral discourse. Even though the detection of formulae such as idioms and phrasal verbs seem to be achievable, other sequences that consist of two or more units need some extra effort to identify. As an example, Wood (2015) describes discontinuous expressions as "hard to identify" because fillable slots and expressions with two parts tend mostly into surrounding text like – *not only ... but also,* for instance. As a solution, Pawley (1986) created a

chart of twenty-seven analytical criteria while Moon (1998) and Wray (2002) and other scholars have created similar lists to be used for the identification of formulaic sequences in different corpora (see 2.5.5.1).

2.3 Researches on Formulaic Language

As far as classification of formulaic language is concerned, there is a consensus on different classes of formulae; idioms, collocations, phrasal verbs, lexical phrases, and lexical bundles (Wood, 2015; Wray, 2002). However, researchers seem to be interested in classifying these sequences according to certain criteria. Pawley (2007) presented seven pragmatic function based criteria for classification. While Nattinger and DeCarrico (1992) labelled their categorization set as "lexical phrases" focusing on pragmatically specialised functions which the researcher discusses more (see 2.17).

Occurrence and frequency of formulae within specific texts or discourse, as labelled by Wood "prevalence" has taken a part in modern research on formulaic language. Scholars chose specific corpora, like given register and genre, to identify the percentage of prefabricated chunks of language. This proportion differs between corpora as we may notice the divergence between the London Lund corpus that is consisted of 80% of formulaic sequences (Altenberg 1998), and the work of Erman and Warren (2000) who found out that 52-58% of texts in corpus are formulaic. Nevertheless, the results remain approximate because of the different charts or criteria used by these researchers to identify different formulaic sequences. Still, the percentages show promising results for further research in this area.

The effect of formulaic language on speech production and comprehension is a main research topic by scholars today for its immense importance especially for second/foreign language learners. Wood (2006, 2009a, 2009b, 2010a) examined the degree formulaicity affects speech fluency and found out that the increased application of formulaic language facilitates the production of fluent speech. Also, Assassi and Benyelles (2016) investigate the effect of formulaicity on communicative

competence and speech fluency; the outcomes were significantly positive as EFL learners' communicative competence, fluency, and pragmatic ability were improved.

Research on the acquisition of formulaic sequences has taken place first for children acquisition strategies and language development (Filmore, 1976; Peters, 1983; Wray and Perkins, 2000). Even though the role of formulaic language in adult second/foreign language acquisition seems to be less clear than that for children; current research, as mentioned before, focuses increasingly on adult language learner since speech fluency is the main objective of most of them. On the same breath, Schmidt (1983) conducted a case study on the English language development of a Japanese adult in Hawaii. He found that the participant had an increasing number of formulae in his speech and that they were an essential part of his language acquisition; additionally, formulaicity helped the research subject to develop language ability through adopting formulaicity as a communication strategy and a lane through acculturation.

Finally, Wood (2015) believes that lexical bundles were a centre of investigation after the development of corpus analysis tools and innovative technological aids to investigate formulaic language. Lexical bundles are generally a "combinations of three or more words that are identified in a corpus of natural language by means of corpus analysis software programmes" (p. 15). Lexical bundles occur in texts within a specific corpus; that is the reason for the existence of some formulae exclusively for a single discipline. In another example explained by Wood (2015), lexical bundles frequently occur in published academic papers such as journal articles. Biber (2006) realised through his research that the use of lexical bundles in academia is different; natural and social sciences use them more than the humanities.

To put it briefly, Wood (2005, p. 16) summarises the research conducted on formulaicity and their outcomes up until now through the following:

- Formulaic language is important in spoken and written language.
- Formulaic language is defined in certain ways.
- Formulaic language has been studied from a wide range of research and disciplinary traditions.

- Formulaic language study has only been synthesized and pulled together over the past two decades or so.
- There are still a wide range of questions about formulaic language.

2.4 Defining Formulaic Language

Research on formulaic language is developing on a regular basis, researchers and scholars are investigating the occurrence of formulaic sequences and their effect on both language acquisition and production. However, since there is still no single satisfactory definition for this aspect of language, researchers provided tentative definition of formulaic language in general to give the chance for further investigations.

2.4.1 A Working Definition

Formulaic language has been receiving an increasing amount of attention recently. That is to say, the effect of formulaicity on a large number of linguistic and applied linguistic aspects like reaching fluency in addition to its variation and numerous occurrences in all corpuses has made it the main research interest for a great number of scholars around the world. Wood (2015) confirms that this research area is expanding globally. Mainly because of the large number of journals, research papers and graduate theses on or related to formulaicity. Nevertheless, Wray (2009) believes that the great challenge of defining a phenomenon (partially, a linguistic fact) opens up with the manner of talking about defining it. (P. 28)

Relevantly to the sequences' function, Wray (2009, p. 29) provides three types of definition for a certain phenomenon as follows:

- (i) definitions you start with, in order to explore the fundamental nature of the defined phenomenon;
- (ii) definitions you end up with, that describe and explain the defined phenomenon;
- (iii) definitions you work with, that reliably identify examples so that other questions can be asked about them.

Moreover, she clarifies the process as:

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> Types (i) and (iii) are both, technically, <u>stipulative</u> definitions –
> that is, the researcher decides what will fall inside and outside
> the boundaries of the definition, as the basis upon which the
> analysis proceeds. Type (ii) definitions are descriptive – the
> evidence determines their configuration, and there are particular
> opportunities for research in consequence of them. (P. 29)

Based on these criteria, Wray (2002a) defines formulaic language as:

> A sequence, continuous or discontinuous, of words or other
> elements, which are, or appear to be, prefabricated: that is, stored
> and retrieved whole from memory at the time of use, rather than
> being subject to generation or analysis by the language grammar.
> (P. 9)

Even though scholars around the globe who are interested in researching formulaicity rely on this definition a landmark created by a pioneer in this area or investigation for their further studies, there is less consensus on one single satisfactory definition for formulaic language.

2.4.2 Definition from Different Perspectives

Ellis, et al (2008) define formulaic language as "strings of words which co-occur with greater than chance frequency and whose meaningfulness is not open to serious doubt, unlike word strings such as in the which are frequent but semantically incomplete" (cited in Lindstromberg et al. 2016, p. 12). Additionally, and in defining a type of prefabricated chunks of language which is collocations, Erman (2009, p. 324) identifies it as "native speakers' preferred combinations of words". This came as a reaction to Wray's perspective on some of formulaic sequences as preferred ways of saying things. On the other hand, Terkourafi (2006) for example generally defined formulaic language as the one covering a range of prefabricated single linguistic pieces in the form of idioms, proverbs, collocations, turns of phrase, and speech act routines.

2.5 Describing Formulaic Language

The main parameters set by Wood (2015, p. 3) to describe formulaicity, with his belief that they consensually define those sequences are:

- Multi word form.

- Have a single meaning or function.

- Be prefabricated or stored and retrieved mentally as if a single word.

Additionally, Wray's (2002) definition of formulaic sequences consists of the notion that the structures are stored and retrieved completely from memory at any time of use.

If we observe the latter thoroughly, we can notice that "wholeness" is common between different perspectives and thoughts about formulaicity. Terkourafi (2006) supports this viewpoint as she states that such sequences: are holistically retrieved by the speaker and processed by the hearer. The latter is characterised as a two edged sword for EFL learners and researchers. it stands as a facilitator in acquisition/study, and as trait that hurdles in creating a single satisfactory definition for formulaicity since Wray (2009) believes that "One cannot go to data and reliably pick out items on that basis: we do not have an independent way to establish that something is - stored and retrieved whole-" (p. 30)

Other aspects and characteristics of formulaic language stand in the way of coming up with a unified definition for formulaicity. For example, while investigating a formulaicity-related study, scholars lean towards adopting different definitions according to their "particular theoretical perspective or customary concerns" (Pawley, 2009; p. 4) and this was what we can notice through the definitions we have discussed here as well.

Wood (2015, p. 3) declares, "for example, *haste makes waste, at top speed, in the case of*. Some of them look a bit mysterious at close examination, and we wonder how they came to be used as they are—how did we ever come to agree on the use of strange items such as *by and large* or *look up*?" From a logical perspective, it seems strange and quite impossible to easily explain or answer this question. Yet, arbitrariness as a feature of language may clarify this ambiguity to a certain extent.

Terkourafi (2006) believes that frequently, there is no particular linguistic ground on which we can prefer a certain expression to a semantically equivalent expression to perform a particular communicative function. Nevertheless, this seems to make things even vaguer. Thus, the former makes it more complicated to agree on a single satisfactory definition and describe it as a fuzzy language phenomenon.

Finally, and in relation to our research project and its objectives, we rely on the most used parameters featuring the identification and the classification of formulaicity as stated earlier by Wood. The reason behind this is simply related to fluency and the role played by formulaicity in helping to increase EFL learners' conversational competence. Lindstromberg et al (2016) based on the work of (Boers and Lindstromberg, 2012; Henriksen, 2013; Peters, 2014; Schmitt and Carter, 2004) clarify that knowing a large number of formulaic sequences as a non-native speaker is a key facilitator of fluent comprehension and production. Also, they believe, in relation to (Boers, Eyckmans, Kappel, Stengers, and Demecheleer, 2006; Dai and Ding, 2010; Schmitt, 2008, p. 340; Stengers, Boers, Housen, and Eyckmans, 2011) that learners who acquire and use L2 phrasal expressions accurately and appropriately are seen by others (native and non-native speakers of English) as rather proficient.

2.5.1 Nature and Characteristics of Formulaic Language

Formulaic language importance lies mainly on its positive influence on learners' communicative abilities and listening comprehension; in other words, it helps learners develop a native like language proficiency through a better fluent speech and coherent writing. This may raise a question on the reason behind this powerful positive influence of formulaicity.

According to Biber et al. (1999) and Erman and Warren (2000), between 50% and 70% of the English language is formulaic. In a more recent work conducted by Syianova-Chanturia (2015) She adds, "Formulaic language is important because it constitutes a large proportion of authentic native-speaker discourse" (p. 286), which is important to EFL learners' to reach fluency as stated earlier. The latter cannot be a satisfactory basis for the positive effect of formulaicity; nevertheless, she includes

that several corpus and applied linguists believe that formulaic sequences are processed as "unanalysed" chunks or holistic units of language (p. 285). What is actually special about the holistic processing of formulaic sequences in general is the minimal mental effort required for these chunks as far as language acquisition is concerned. The same researcher confirms this by stating, "It has, indeed, been demonstrated that, due to their frequency and predictability, formulaic sequences are processed quantitatively faster than matched novel phrases" (*ibid*).

To enhance the credibility of this perspective on the nature of formulaicity, as holistic and recurrent, Kim and Kim (2012) research outcomes on the effect of the frequency of multiple units verbs on their processing revealed that two-word verbs like "find out, sort out" are stored as unanalysed units. Years before, the significant role ready-made chunks of language play in language acquisition and production has lead Wood (2002, 2015) to believe that there is a broad consensus on the idea we are discussing currently, he believes that multi-word units of language are stored in the long-term memory as if they were single lexical units.

Finally, and in terms of meaning, Pawley and Syder (1983) believe that the meaning of the formulas has a direct link to their holistic nature. They state that those formulas are "sentence stems- which are lexicalized, that is, which are "regular form-meaning pairings" (p. 192). The researcher, in this part, focuses on the most discussed points and the most researched perspectives on formulaic language as a newly introduced area of research. Thus, the study discusses the complex and functional nature of formulae briefly later on for lack of tangible resources.

2.5.2 Characteristics of Formulas 'Fixedness and Variability'

According to several researches, fixedness and variability might be the main studied characteristics of formulaic sequences. Between fixed expressions and those that vary, lays an interesting perspective that leans toward fixedness as a feature of formulaic sequences. The reason behind this idea is that the holistic process of acquisition and use of these formulae reinforces the idea that formulaic sequences are

fixed. However, Schmitt (2005) believes that "two key characteristics of formulaic language: fixedness and variability.

Formulaic language is usually conceptualized as being basically fixed, but examples are given to illustrate that in many cases formulaic language contains a considerable amount of variation" (p. 13). Researchers and scholars believe in this perspective to be the major reason for the difficulty faced in forming a satisfactory unified definition for formulaic language. Schmitt (2004, p. 3) clarifies the idea by providing a couple of examples. He states that "You can lead a horse to water, but you can't make him drink" and "Oh, no!" are both formulaic, and anything between these two examples, as far as the expressions' length is concerned, is also formulaic if they fulfil other criteria that will be discussed later within the identification process of formulaic sequences. Apart from the length of the sequence, Schmitt discusses fixedness also in terms of the formulas' form. He believes that wholly fixed phrases like (Ladies and Gentlemen) or sequences like ([someone/thing, usually with authority] made it plain that [something as yet unrealised was intended or desired]) are both considered formulaic for the reason of their fulfilment of other criteria like frequency of use and occurrence.

Finally, and before discussing other lists of criteria, we decided to discuss the phonological coherence of formulaic sequences in oral speech, since, it is the language skill we are mostly concerned with in this study. Wood (2015) elaborates this specific feature in accordance to the work of Lin (2010, 2012).He states:

> Another measure used to identify formulaic sequences in spoken language can be phonological coherence, Formulaic sequences tend to be uttered with particular prosodic features such as alignment with pauses and intonation units, resistance to internal dysflency, no internal hesitations, fast speech rhythm, and stress placement restrictions. (P. 25)

This might be helpful for foreign language learners as it is in accordance to the nature of formulaic sequences as wholly processed language items. Wood (2002, p. 8) following the study conducted by Bolander (1989) believes that "An intriguing

aspect of the storage and retrieval of formulas as wholes is the idea that they are articulated as wholes as well. This allows for the phonological coherence that is characteristic of their production". Thus, the researcher believes that these two aspects, the holistic nature and the phonological coherence of formulaic sequences can ease the acquisition process for the learners.

2.5.3 Noticing Formulaic Language

One of the main controversial and challenging aspects of formulaic language is the "how" we notice formulaic sequences. What does make an utterance, a group of language units, or a string of words formulaic? I.e. prefabricated chunk of language. Through many years of research, it has become apparent that noticing or pinning formulaic sequences in speech or written materials is not an easy task. Many scholars (stated later in this section) have put characteristics of formulae to rely on through this procedure. In addition, others have selected the most agreed on criteria and created checklists to identify prefabs (formulaic sequences).

Apart from the constant grammatical structure, one may use two different utterances following the same pattern; the first might be an ad hoc momentary production, while the other might be a recurring or a reuse of a previously coined sequence (Lounsbury, 1963). The latter is characterised by frequent use, which is one of the main criteria used to detect formulaic sequences. On the next section, we will discuss the main criteria utilised by researchers/scholars to identify prefabs as well as the most used checklists developed so far to detect such expressions.

2.5.4 Detecting, Identifying and Noticing

For research methodology purposes, the researcher discusses the definitions of formulae then different approaches for identifying, noticing, and detecting these prefabs. However, Wray (2008) asserts that focusing on various methods of identifying these language chunks before setting a definition is also viable for study. This comes because of the following assumption stated by Wray in her diverse studies. She believes that the definition and the identification of formulaic sequences

is a circular process. Thus, we can say that it is as a continuum and both are under investigation and interchangeably in terms of which one to study first.

Scholars interested in formulaic language as a growing field of study discuss two methods of identification. First, by relying on empirical data like questionnaires or interviews while conducting experiments; and the second is using the known criterion or a set of criteria (see 2.5.5.1) to help detect formulae in corpuses or other linguistic materials. Apart from clear cases of formulaicity as in idioms and phrasal verbs, Wood (2015) asserts that discontinuity of some expressions with fillable slots that seem to blend into joint text like "not only ... but also" are the ones which need more effort for detecting; thus, the necessity for a group of criteria for identification.

On an informal chat with professor David Wood on several occasions on January 2017, via IM (Instant Messaging) Gmail and twitter. One of the pioneers of formulaic language research asserts that there is no one perfect checklist and it is always preferable to choose the suitable criteria for the research objectives and what the researcher is looking for in a specific corpus. As we are dealing mainly with spoken corpora and the development of language fluency for aviation professionals, Wray (2002, 2008) and Wood (2015) claim that most of the criteria forming those checklists are accurately helpful more with identifying formulae in spoken language corpora.

Every characteristic related to formulaic sequences is equally important for researchers. However, one cannot rely on a single trait to identify or detect formulaic sequences in any type of written or spoken corpora. On the other hand, researchers provide different checklists to use for identifying formulae and that can help coming up with more outcomes that are satisfactory.

2.5.5 Detecting Formulaic Sequences through Corpus Analysis Computer Software

An example discussed by Wray (2002) and Wood (2015) about the use of corpus-analysis computer software to detect formulae. At first, it seems like a very interesting method for identifying sequences. Yet, it does not fulfil all the

requirements for an accurate identification. This is mainly because this "discussed" software relies on frequency of sequences as a main criterion to detect formulae by setting a threshold frequency. Thus, the main issue is the distribution of some formulaic sequences that the software cannot detect. For example, "put off" is a formulaic expression by which we can detect using the computer software. On the other hand, the word formation "put (a noun clause) off" is also formulaic but undetectable by software.

Therefore, the question here is, what is the acceptable distance between components of any sequences to set a boundary between what is formulaic and what is not, which is an important issue as well. To sum up, fillable slots in formulaic sequences present a challenge to software, and using one criterion (frequency) does not seem to realise the identification task effectively even if researchers focus more on frequency as a main characteristic of prefabs. Thus, checklists with a group of criteria might be the key for a successful identification process.

2.5.5.1 Detecting Formulaic Sequences through Checklists

On the following part, the researcher discusses the four checklists argued in Wood's (2015) latest work (Fundamentals of Formulaic Language) which is basically the most recent work on formulaicity, and it summarises most of the outcomes researchers came up with. These checklists share some similar criteria even if their creation was in different eras of formulaic language research.

2.5.5.1.1 Coulmas's Checklist

The first checklist is Coulmas's (1979) earliest list of criteria. It includes the following:

- at least two morphemes long (i.e., two words);
- coheres phonologically;
- individual elements are not used concurrently in the same for;
- separately or in other environments;
- grammatically advanced compared to other language;

- community-wide formula;

- idiosyncratic chunk;

- repeatedly used in the same form;

- situationally dependent;

- may be used inappropriately.

Coulmas (1979) focuses more on the phonological coherence of formulae, in addition to their composition of at least two morphemes; i.e. easily, fluently, and hesitation free polymorphemic utterances. In addition, he puts the contextual/situational irrelevance of some formulae as a significant criterion for an accurate identification of prefabs. Finally, Coulmas asserts that formulae are relatively more syntactically and phonologically complex; thus, grammatically advanced. The latter proves one of the secondary objectives we seek to discuss as non-native speakers learn to use these holistically acquired and used formulae help them reach fluency and sound native-like by using grammatically complex word formations.

2.5.5.1.2 Peters' Checklist

The second was Peters' (1983) "Formulaicity in Child First Language Speech" similar to what Coulmas has come up with as criteria for identifying formulaic sequences in different corpora, Peters focused on prefabs produced by children's first language production. Therefore, no immense difference we can notice in his checklist. He proposes the following:

- Phonological coherence;

- greater length and complexity than other output;

- non productive use of rules underlying a sequence;

- situational dependence;

- frequency and invariance in form.

As we may notice, Coulmas and Peters focus nearly on the same main points in detecting prefabricated chunks of language. The latter as stated above focuses more

on the non-productive use of formulae and their higher occurrence frequency than other output, which indicates that formulaic sequences are acquired, memorised, and retrieved holistically at the time of use.

2.5.5.1.3 Wray and Namba's Checklist

The third checklist consists of a set of coherent criteria. Wray and Namba's (2003) "Gradiance of Formulaicity" contend an eleven criteria checklist for detecting formulaic expressions. The checklist is used to assign formulaicity to different utterances of bilingual children. The researchers use a Likert scale of 1 to 5 to allocate the degree of formulaicity according to their perception for each word string, (if it is formulaic or not). The same procedure we can apply for all the 11 diagnostic criteria for identification of formulaic expressions, and they are as follows in (Wray and Namba, 2003, cited in Wood, 2015, p. 26-27).

- By my judgment, there is something grammatically unusual about this word string.
- By my judgment, part or all of the word string lacks semantic transparency.
- By my judgment, this word string is associated with a specific situation and/or register.
- By my judgment, the word string as a whole performs a function in communication or discourse other than, or in addition to, conveying the meaning of the words themselves.
- By my judgment, this precise formulation is the one most commonly used by this speaker/writer when conveying this idea.
- By my judgment, the speaker/writer has accompanied this word string with an action, use of punctuation, or phonological pattern that gives it special status as a unit, and/or is repeating something s/he has just heard or read.
- By my judgment, the speaker/writer, or someone else, has marked this word string grammatically or lexically in a way that gives it special status as a unit.

- By my judgment, based on direct evidence or my intuition, there is a greater than chance-level probability that the speaker/writer will have encountered this precise formulation before, from other people.

- By my judgment, although this word string is novel, it is a clear derivation, deliberate or otherwise, of something that can be demonstrated to be formulaic in its own right.

- By my judgment, this word string is formulaic, but it has been unintentionally applied inappropriately.

- By my judgment, this word string contains linguistic material that is too sophisticated, or not sophisticated enough, to match the speaker's general grammatical and lexical competence.

This list presents a helpful guide for researchers, as it is the only one comprehensive enough, and gathers all the characteristics tagged as formulaicity's so far. We can use the checklist for both written and spoken corpora and we can modify it according to the researcher's study objectives or intentions. To sum up, Wray and Namba's checklist is the most ambitious; it tackles eleven criteria addressing thirteen points on different language aspects. Thus, this checklist can be the threshold of formulaic sequences identification processes.

2.5.5.1.4 Wood's Checklist

Wood (2010a) develops the fourth list; he conducted an experimental study to detect formulaic sequences in a specific corpus. However, what made this study more interesting is his technique of identification. He relied on native speakers' judgement, intuition to determine what is formulaic, and what is not. Alongside two of his co-researchers, he used criteria from recently discussed checklists as the basis of their judgement. The study discussed the occurrence of formulaicity in corpus produced by non-native speaker of English and its effect of their language fluency, which is the central concern of our study. Accordingly, the judges used the following criteria: (Wood, 2010a, p. 111-112).

- Phonological coherence and reduction. In speech production, speakers utter formulaic sequences with phonological coherence (Coulmas, 1979; Wray, 2002), with no internal pausing and a continuous intonation contour. Phonological reduction may be present as well, such as phonological fusion, reduction of syllables, deletion of schwa, all common features of the most high-frequency phrases in English, but much less in low frequency or more constructed utterances, according to Bybee (2002). Phonological reduction can be taken as evidence that "much of the production of fluent speech proceeds by selecting prefabricated sequences of words" (Bybee, 2002, p. 217).

- The taxonomy used by Nattinger and DeCarrico (1992). This includes syntactic strings such as "NP + Aux + VP" (…), collocations such as -curry favour-, and lexical phrases such as -how do you do?- All of which have pragmatic functions (p. 36). This taxonomy is not necessarily applicable in every case; it was used as a guide to possible formulaicity. For example, if a sequence matched other criteria and fit into a category in this taxonomy, it might be marked as formulaic.

- Greater length/complexity than other output. Examples would include using I would like… or I don't understand, while never using would or negatives using do in other contexts. Judges were able to see and hear the entire output of a particular participant to help in applying this criterion.

- Semantic irregularity, as in idioms and metaphors. Wray and Perkins (2000, p. 5) note that formulaic sequences are often composed holistically, like idioms and metaphors, and not semantically. Examples of this were apparent in the background literature for the judges, and many formulas readily match this criterion.

- Syntactic irregularity. Formulaic sequences tend to be syntactically irregular. This criterion was readily applied to some sequences, but it was important to check syntactically irregular sequences against other criteria on this list.

Wood (2010a) has introduced a new criterion, by stating that native speaker's intuition can help noting intonation and pause patterns since they have a direct link to formulaic language production in spoken corpora, and that cannot be achieved through a machine. Nevertheless, Wray (2002) shows some concerns about the application of native speaker judgement as a technique for detecting formulaic sequences. In his study, Wood (2010a) has treated these concerns delicately by providing suitable solutions: the first part is for Wray's concern, and the second for Wood's treatment.

- The technique must be restricted to shorter corpora/ Wood has dealt with a small set of data.

- Fatigue and alteration may affect the accuracy of the judgements/ Wood had judges listen to and read the transcripts to avoid any kind of judgement inconsistency or alteration in judgement thresholds.

- Variation between different judges/ Wood has prepared discussion and benchmark identification sessions for judges. They analyse different scripts (two) which were not to be used for the experiment (just in the benchmark session) and then present their outcomes, and the formulaic sequences they detected.

- Wray believes that there might be different answers for one question/ Wood had his judges read basically relevant literature on formulaic language studies and after that, to draw five criteria to be studied and applied for detecting formulae.

- Wray believes that the use of intuition as a technique for indentifying formulae may not reach the beyond the surface level of awareness/ Wood asserts that the benchmark session has enough data (identification criteria) to be studied through salient literature and then applied through different transcripts or records; and finally, share and review the formulaic expressions each one has detected.

From different currently existing and used checklists, we can notice that they all reject the idea of using one criterion for detecting formulae. Researchers should take into account that some formulae occur once only in large corpora, or even small ones as discussed before. These formulae may also be highly idiosyncratic, which is one of the main traits of formulaic sequences stated earlier as "situational dependence".

Another example of using single criterion for identifying prefabs is the compositional nature of formulaic language. Picking any word combination would not come up satisfactory because these language chunks should cover a unitary meaning or function as a whole. Thus, using checklists and adjusting them according to the researches needs and objectives might be the most satisfying technique so far.

To sum up, identifying formulaic sequences in transcripts or spoken corpora necessitates an organised process and an accurate list of criteria to take into consideration. However, some types of prefabs might be easier to detect, idioms and phrasal verbs with a shorter distance between the two components are the most suitable examples. All studied lists provide a great deal of help for researchers. Using one list, an edited version, or even combining checklists' components may serve the researchers best in their studies as we said that a group of measures is always better than a single criterion. In addition, native speakers' intuition in using any checklist can always be an assisting measure for more accurate outcomes. Even so, and regardless of the measures or the techniques used, absolute results are elusive.

2.6 Boundaries of Formulaic Language

Many questions investigators ask frequently to set up the boundaries of formulaic language. As an example, is this a formulaic or a non-formulaic sequence? What can we consider as formulae?

On section (2.5.5.1), we have discussed several checklists of criteria used to detect formulaic sequences. As a result, this challenging process of noticing prefabricated chunks of language can neither depend only on as single criterion nor a specific checklist; as the process can help identifying most of prefabs (according to

the chosen criteria) but not all of them. Fernandez-Parra (2005) claims that formulaicity is a fuzzy phenomenon with blurry boundaries; it overlaps with some lexical bundles (forms) and include others. Thus, we can assert that the boundaries do exists to a certain extent and as far as studies on formulaicity got; nevertheless, the amount of data and research in addition to outcomes in the form of criteria checklists are more than enough to develop research into this modern field of study.

Fernandez-Parra (2005) exemplifies the notion of fuzzy boundaries through a set of illustrations. First, by clarifying that the traditional idiomaticity stands as a subclass of formulaicity since we can say that all idiomatic expressions are formulaic, but not all formulaic sequences are idioms since the former includes more subclasses like: Collocations (e.g. teething problems, blond hair), conventionalized greetings (good morning, safe journey), and many other expressions. For instance, "kick the bucket", "good morning", "fish and chips", "first thing tomorrow", "thanks a million", "money talks", "safe journey", are all considered formulaic expressions, but only "kick the bucket" may be considered as an idiom. The following figure introduces the fuzzy boundaries between formulaic sequences and other lexical forms.
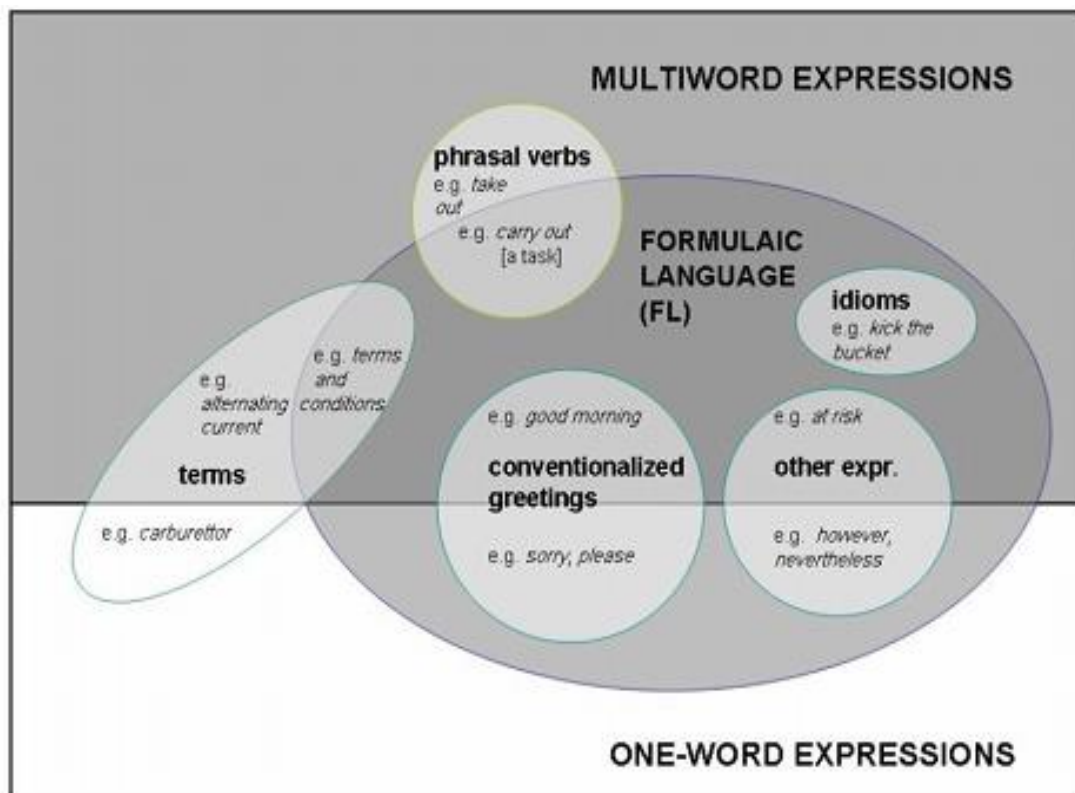
Figure 2.1: Formulaic Language and Other Lexical Forms (Fernandez-Parra, 2005, p. 52)

The figure above represents a summary of this section and a clarification for the fuzzy boundaries of formulaic language in general. As we can notice, idioms are, in a whole, considered as prefabricated chunks of language; however, other formations like some phrasal verbs, technical/semi-technical expressions, and even subordinate conjunctions are formulaic while others of the same nature are not. The question raised here is whether Fernandez- Parra has set her own checklist for detecting formulae, and on what base has she done so? If yes, why has she dropped one of the most important criteria that is the multi-word nature of prefabs? As most recent studies including Wray (2008), Dickinson (2013), Kashiha and Chan (2015), and Wood (2015) focus more on the multi-word form of all formulaic sequences, frequently labelled as "lexical bundles". As a result, some conventional greetings "sorry, please", and subordinate conjunctions "nevertheless, however" cannot be considered as formulaic.

Since we could not reach Professor Fernandez-Parra on different occasions (January 2017) and in a non-structured and unorganised chat with professor Wray via email on the same period, the researcher took advantage of the chance to acquire more details on the subject matter (formulaic language studies).The professor is a colleague of the former and a pioneer on this field of study; she asserts that this classification on the figure above is not based on a single checklist (ready-made or adapted) but rather on frequency and function of these sequences. She clarifies by using the two phrasal verbs on the figure (carry out and take out). The former is a formulaic sequence because of the function it serves away from the literal meaning of the sequence itself (carry out a task, not actually holding it). While the latter is not regarded as a prefab because it serves its literal meaning and has no situational-bound meaning.

To sum up, the classification provided by Fernandez-Parra is viable in terms of pointing out that formulaic language has some fuzzy boundaries. Nonetheless, the multi-word form of formulaic sequences has a tight bond to the situational-bound meaning of the formulae that is a very crucial aspect of formulaic language in general; thus, one cannot ignore this criterion when pinning out prefabricated chunks of language.

2.7 Functions of Formulaic Language

The present section explores the different perspectives on functions of formulaic sequences as prefabricated chunks of language. Formulaicity has a crucial in developing foreign language learners' communicative competence and fluency. Different body of research such as (Aijmer, 1996; Coulmas, 1979, 1981; Cowie, 1988; Nattinger and DeCarrico, 1992; Wray and Perkins, 2000) have proved the importance of formulaicity in written and spoken discourse; more accurately, different genres and registers.

Our current research interest is mainly the general language use (plain English) by aeronautics' professionals in non-routine situations. In addition to the ICAO (International Civil Aviation Organisation) language requirements (fluency);the

control of different language functions in plain English for non-routine situations (incidents, accidents, and emergencies) and for the English language test required by all flying companies and ministries of transportation as a good control over different functions using formulaic sequences nearly assures succession in this test.

- **Different Perspectives on Prefabs' Function in Language**

Formulaic language or prefabs are a very important part of language used daily by native and non-native speakers. Accordingly, we can find similarities in a number of functions they both serve. Sinclair (1991) clarifies by asserting that language consists of a range of patterns such as lexical clusters that have specific functions. Cameron (2009) adds, "in addition to its communicative and representative functions, language has expressive and social functions which correlate iconically and systematically with structural variations" (p. 553).

Wray (2008) and Scheibman (2009) discuss several functions of prefabricated chunks of language. They argue that formulaicity acts like an instrument for social interaction through serving interlocutors in conversations by manipulations of others, asserting separate identity, and asserting group identity. In relation to our case of study, formulaic sequences help aeronautics professionals save and assert the group identity within international pilots' community for instance.

Nattinger and DeCarrico (1992) organise three main categories of functions serving daily language use for lexical phrases (formulae): *social interaction, necessary topics, and discourse devices*. They add, and as discussed in Dickinson (2013), he provides different examples for each category.

- As for ***social interaction***, it is quite noticeable that most of sequences used for different functions in societal communications are prefabricated and frequently used as single chunks to "break the ice" for instance since they are a key element of informal spoken discourse. They are either used for conversation maintenance like "opening (hey there/what's up), closing (I've got to run), and clarifying (what I mean is X)". Alternatively, communicative intentions through direct speech acts like requesting, complimenting, blaming...).The functional use of these formulae secures

social solidarity by applying non-threatening acts (phrases), help continuing a smooth conversation, and avoiding any kind of communication breakdown.

- ***Necessary topics:*** as a function is in relation with expressions used exclusively in certain domains/situations. They target precise information transfer since they are technical/semi-technical and situation bound utterances. As an example, a scalpel is a specific type of knives used in medicine. Moreover, less technical and more situation bound utterances are the main characteristics of sequences used for "shopping, autobiographies, weather..." Schmitt (2002) emphasises on the aspect we have mentioned earlier, that formulaicity is closer to multi-word sequences rather than single-word units. In addition, in relation to this general function category and our study population, he confirms:

  Fields often have extended phraseology to
  transact information in a way which minimizes any possible
  misunderstanding. For example, in aviation language, the phrase
  "Taxi into position" and "hold" clearly and concisely conveys
  the instructions to move onto the runway and prepare before
  departure, but to wait for final clearance for take off. (P. 2)

- Lastly, formulae which act as ***discourse devices*** chiefly regard the organisation and connection of structure and meaning for both written (all in all, in other words) and spoken discourse (as I was saying, as I mentioned, to make things clear).

To sum up, the major role of formulaic sequences in social conversation is to maintain relationships through smooth and effective transfer of information and speech acts. Prefabs are found and thus assist the communication's stable flow to ensure social belonging and identity throughout social interactions (speech acts), using specific terminology (necessary topics) and finally organising discourse (discourse devices).

The following table shows the different language functions that can be fulfilled through several formulaic sequences.

Function	Effects	Types	Examples
Changing one's physical and perceptual environment	Satisfying physical, emotional and cognitive needs	• Commands, bargains, requests, etc. • Apologies • Politeness markers	• Keep off the grass; I'll give you ____ for it; pass that over, will you? • I really am sorry • I wonder if you'd mind ____
Asserting separate identity	a) Being taken seriously	• Storytelling • Turn claimers and holders, etc.	• You're never going to believe this, but . . . • Yes, but the thing is . . . ; Thank you very much (*in response to invitation to speak*); The first thing that you have to realize, of course, in addressing this issue is . . .
	b) Separating from the crowd	• Personal turns of phrase	• I wanna tell you a story (*Max Bygraves*); You know what I mean, Harry (*Frank Bruno*)
Asserting group identity	a) Overall membership	• 'In' phrases • Group chants • Institutionalized forms of words	• Praise the Lord!; as the actress said to the bishop • We are the champions • Happy birthday; dearly beloved, we are gathered here today . . .
	b) Place in hierarchy (affirming and adjusting)	• Threats • Quotation	• I wouldn't do that if I were you • "I wouldn't want to belong to any club that would have me as a member" (Groucho Marx)
	c) Ritual	• Forms of address • hedges, etc. • Performatives • Incantations • Prayers	• Your Highness • Well I'm not sure (as a polite denial or refusal) • I name this ship . . . ; I promise . . . • Touch wood; God willing • Our Father, which art in Heaven . . .

Table 2.1: Formulaic Sequences as Devices for Situation Manipulation Wray (2002, P. 89)

Lastly, formulaic sequences are a major constituent of everyday speech, their importance, in addition to faster acquisition and processing, lays in their use in

everyday speech and their fulfillment of a large number of language functions as this table shows.

2.8 Main Types of Formulaic Sequences

After answering the question about what we can consider as formulaic, and what cannot, it is time to shed light on the different parts that constitute formulaic language.

There have been several ways describing and categorising formulaic sequences, Wood (2015) claims that researchers were not studying the same phenomenon and were not specialised; it was a result of the growing number of research interested in this area from different linguistic and non-linguistic fields of investigation. As non-linguistic studies, he spots social anthropology and neurology. On the same breath, we have noticed different areas of research interested in formulaic sequences nowadays, unlike the ones Pr. Wood mentioned, the ones we investigated were in a way or another related to formulaicity as a new field of research. Worth mentioning the work of Bridges and Van Lancker Sidtis in Aphasiology (2013) entitled "Formulaic Language in Alzheimer's Disease".

The diverse standpoints and nature of investigations of the phenomenon called formulaic language have led researchers to use different labels for formulaicity as shown on the following table.

Amalgams	FEIs	Gambits	Lexicalised phrases
Automatic	Petrification	Formulaic Speech	Preassembled speech
Chunks	Formulas/formulae	Holophrases	Routine formulae
Clichés	Fossilised forms	Idioms	Readymade utterances
Holistic	Idiomatic	Lexicalised sentence stems	Rote
Collocations	Frozen phrases	Multiword units	Non-productive
Composites	Formulaic language	Non-compositional	Irregular
Gestalt	Fixed expressions	Non-computational	Sentences builders
Coordinate Constructions	Synthetic	Schemata	Praxons
Prefabricated routines and patterns	Conventionalised forms	Readymade expressions	Semi-preconstructed phrases that constitute single choices
Unanalysed chunks of speech		Stable and familiar expressions with specialised subsenses	

Table 2.2: Terms Used to Refer to Formulaic Language (adapted from Wood, 2015, p. 36-37)

Within the different categorisations, we have noticed that some parts of formulaic language have been set on a common ground among researchers, and are highly frequent like idioms, collocations and proverbs. However, others are less frequent like metaphors, compounds and congrams. Both former parts are valid; nonetheless, Researchers have not validated other parts like "preferred ways of saying things". What is certain about these different classifications is that they all meet and

relate to the holistic nature of formulaic language and its multi-word composition in form.

As researchers still putting a great effort into studying formulaicity, and since there still no single satisfactory definition for the so called formulaic language, the boundaries between different parts of formulaic sequences are still blurry. In this study, we focus more on the classification provided by Wood (2015) as an updated classification.

2.8.1 Idiomatic Expressions

Nowadays, the word idiom is used in a broader sense reaching to be a part of some researchers' definitions of formulaic language in general; stating that the notion of formulaicity is the key of idiomaticity, and that all formulaic sequences are idiomatic in nature. Thus, it seemed like formulaic language is the new generalised term for idiomatic sequences. Nonetheless, there has been a consensus on a more generalised definition of idiomatic expressions by Cornell 1999; Flavell and Flavell 1992; Hudson 1998; Irujo 1986; McCarthy 1998; Nattinger and DeCarrico 1992;Williams 1994; Wood 1986, all affirm that an idiom holds the meaning of the whole as different from the sum of the consisting parts as single units. To be more specific, Moon (1998, p. 4) defines an idiom as "fixed and semantically opaque of metaphorical" giving this complex language phenomenon no room for variability, substitution, or manipulations of any sort *(kick the bucket, spill the beans)*. In addition to that, no visibility of meaning through the structure of the idiom can be spotted.

According to Wood (2015) many exclusion were made for the sake of limiting idioms to be "fixed and figurative in meaning". Worth mentioning: Weinreich's work (1969 cited in Wood, 2015) who excluded the so-called stable collocations such as "*two wrongs don't make a right*", for the sake of lacking the figurative interpretation which is a major characteristic of idiomatic expressions.

Fraser (1970) indicates a hierarchy that contains six levels to ensure the form fixedness by encompassing manipulation and transformation of a specified idiom, (cited in Wood, 2015, p. 41), he includes the following:

1. **Completely frozen**—no transformation or manipulation is possible.

2. **Insertion**—insertion of a non idiomatic item into the idiom, for example, *she read the class the riot act*.

3. **Permutation—inversion** of direct and indirect object, for example, *cannot teach an old dog new tricks* and particle and noun inversion when the noun is part of the idiom, for example, *put on some weight/ put some weight on.*

4. **Extraction—passivization**, for example, *the buck has been passed too* often and particle and noun inversion, for example, *look up the information/look the information up*.

5. **Reconstruction**—only nominalization of a verb, for example, *she lay down the law* to *her laying down of the law*.

6. **Unrestricted**—no real idioms allow this much transformation

Asfar as idioms are concerned, the fixedness of the form and the figurative meaning of the utterance are the major indicators of an idiomatic sequence.

-   **Categorizing Idioms**

Fixed in form and figurative in nature, idiomatic sequences may be covering other formulaic sequences as far as the figurativeness in meaning is concerned (ex: phrasal verbs) as we may see on the following taxonomy adopted from Makkai (1972, cited in Wood, 2015, p. 42-43):

1. **Phrasal verbs**—verb and one or two particles, for example, *come across.*

2. **Tournure**—a verb and at least two words (often noun phrases), for example, *take the bull by the horns.*

3. **Irreversible binomials**—two nouns or adjectives in a fixed sequence, for example, *safe and sound.*

4. **Phrasal compounds**—compound nouns and adjectives, for example, *high-handed.*

5. **Incorporating verbs—compound verbs**, for example, brainwash

6. **Pseudo-idioms**—compound words or phrases in which one item has no meaning by itself, for example, *chit-chat*.

Another classification is discussed by Wood (2015, p. 43) from the work of Moon (1998) wherein he clarifies more the classification of idiomatic sequences.

1. **Anomalous collocations**—uniquely formed collocations, which may:

a. violate grammatical rules, for example, *day in and day out*.

b. contain items specific only to the collocation and with no meaning outside of it, for example, *to and fro*.

c. be somehow defective, for example, *foot the bill*, in which the

word foot carries a meaning unique to this collocation.

d. be phraseological, or allow variation in structure, for example, *with regard to* or *in regard to.*

2. **Formulae**—grammatical in structure and compositional in meaning, yet pragmatically specialized in function

a. Sayings, for example, *an eye for an eye*.

b. Proverbs, for example, *every cloud has a silver lining*.

c. Similes, for example, *as right as rain.*

3. **Metaphors**—expressions which link the concrete and the imaginary or abstract, with three degrees of transparency

d. Transparent—for example, *stepping stone;*

e. Semi-transparent—for example, *throw in the towel;*

f. Opaque—for example, *pull one's leg.*

To sum up, the researcher proposes some clarifications for the complex language phenomenon at hand, and clarify through the following criteria:

1. The expression is at least two language units in length.
2. Idiomatic sequences are semantically opaque in nature.
3. Idioms may have a possible literal meaning as well.
4. Idioms can be a figurative interpretation of a word sequence (*look for a needle in a haystack*).
5. The lexical units in an idiom co-exist and co-occur together to make it look like a whole single lexical item rather than an assemblage of units, mutual expectancy (Skandera, 2004).
6. Some idiom allow variation (*teach an old dog new tricks/teach new tricks to an old dog*), and others are fixed and reject any type of substitution. Be it on the lexical level by using synonyms, or on the grammatical level like using *the bush is beaten around* (passivizing) instead of *beat around the bush*. Thus, they do not allow any morphological or syntactic variation. Lexico-grammatical invariability/frozenness (Skandera, 2004).

2.8.2 Collocations

The multiword phenomenon called collocation is quite controversial for researchers around the world. O'Dell and McCarthy (2008) reject the idea that collocations have one word combination only (adjective + noun), and believe that any typical word combination can be called a collocation. The challenge, as for most formulaic sequences, is to depict the accurate meaning, as collocations are not

guessable or logical. The following table exemplifies several word combinations that may stand as collocations.

The Combination	The Example
Verb + Noun	Lead a seminar
Adverb + Adjective	Fundamentally different
Adverb + Verb	Flatly contradict
Noun + Noun	Team of experts / words of wisdom

Table 2.3: Typical Words Combination for Collocations (D'Dell and McCarthy, 2008, p. 6)

A collocation' is two lexical items that co-occur together, and they have the same characteristics of other prefabricated chunks of language like their holistic and figurative nature (ex: pay attention, blond hair). Wood (2015) also details by stating that a collocation is a syntagmatic relationship connecting lexical items that co-occur, and he focuses more on the statistical likelihood of these items occurring together.

O'Dell and McCarthy (2008, p. 1) defines it as "a natural combination of words; it refers to the way English words are closely associated with each other". Worth mentioning that the figurative meaning of the combination is not a must to be called a collocation since what mainly characterises a collocation is the frequency of co-occurrence of its components (*ex: lead a seminar VS pay attention*).

The importance of collocations for non-native speakers is, similar to other prefabs, linked to their communicative competence (fluency). O'Dell and MCCarthy (2008) describe the following as a number of aspects, which help learners to be proficient while using collocations:

- Making fewer mistakes by using word combinations more accurately depending on the situation/context.

- The learner will not only make sure that the listener/reader understands his language production but also will sound more proficient and natural while speaking or writing (fluent) as an example: using a great importance instead of a high or big importance.

- The language user will be able to exploit a larger proportion of language by using collocations, ex: saying "*We had a blissfully happy holiday in a picturesque little village surrounded by beautiful mountains*" instead of "*we had a very happy holiday in a nice little village surrounded by beautiful mountains*" would diffidently give the language learner more credit. This would not apply for our case study since aviation professionals would not need creative language on their target situations; however, it would definitely develop their language perception and production to understand native speakers.

- Learners will be able to enlarge their vocabulary vessels by using more "accurate combinations of lexical items" that fit with the speech context for instance.

- **Types of Collocations**

As we may see the importance of collocations for foreign language learners, we may also focus on the different types of collocations. More specifically for those, which occur as duals, since the sequences that consist more than two items are not well discussed or agreed upon up until now. There are three types of collocations:

- **Strong collocations**: strong collocations are words that are closely associated with one another and tend to co-occur in a high frequency and

sometimes exclusively together like *blond* and *hair*. These are some examples:

Collocations	Comments
Inclement Weather was expected.	(very formal) – *unpleasant weather* **Inclement** collocates almost exclusively with **weather**.
She has **auburn hair.**	**Auburn** only collocates with words connected with **hair** (ex: curls, tresses, locks).
I felt **deliriously happy**.	*Extremely happy*, strongly associated with **happy**, not sued with glad, content, sad, etc.
The chairperson **adjourned the meeting**.	*Have a pause or a rest during a meeting/ trial* **Adjourned** is strongly associated with **meeting** and trial.

Table 2.4: Examples of Strong Collocations (O'Dell and McCarthy, 2008, p. 11)

- **Fixed collocations**: the second type represents collocations that are highly fixed in form. The following example clarifies it: *I was walking <u>to and fro</u>*, "*to and fro*" is a fixed collocation, i.e. we can neither remove nor replace any element. In addition, one cannot understand the meaning of the

collocation directly from its constituents; thus, it holds a figurative meaning that can be recognised from the context ('to and fro' means: I was walking in one direction and then in the opposite direction, a repeated number of times).

- **Week collocations**: a weak collocation is one word collocates with more than two other words. The next figure sets an example of this type:

Broad agreement

Broad Avenue

Broad ⟶ Broad smile

Broad shoulder

Broad accent
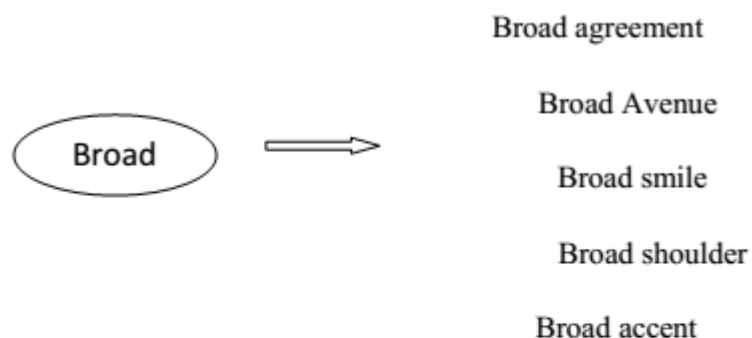
So we can say that broad collocates with a **broad range** of different nouns.

Figure 2.2: An Example of the Weak Collocation "Broad" and the Words That Collocate with it

O'Dell and McCarthy (2008) put on a continuum to clarify the difference between a strong and a weak collocation as shown next:

STRONGER   WEAKER

⇐ -- ⇒

INCLEMENT WEATHER   /   PICTURESQUE VILLAGE   /   BROAD HINT

/   PICTURESQUE LOCATION   /   BROAD SMILE

/   BROAD ACCENT
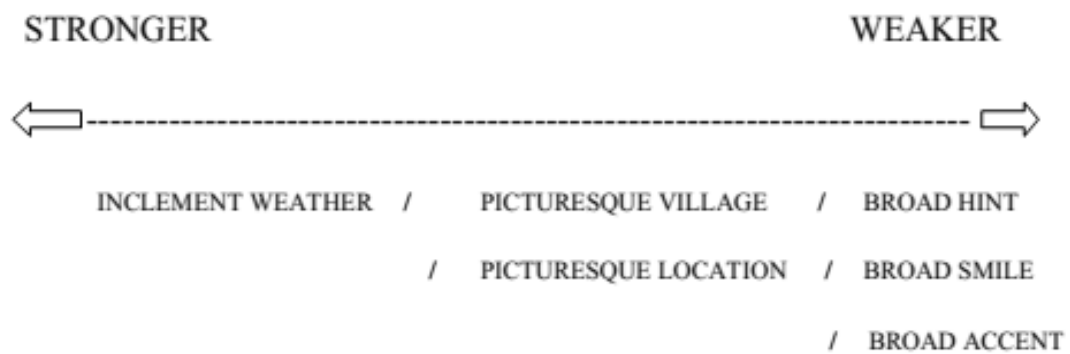
Figure 2.3: A Continuum Showing All the Kinds of Collocations and their Frequency
(adapted from O'Dell and McCarthy, 2008, p. 12)

The continuum clarifies the idea of differentiating between weak and strong collocations. We can notice that on the stronger end of the continuum there is the word inclement that collocates only with weather, another example is mentioned above (blond and hair). On the other end of the continuum, we can find weak collocations that consist of words collocating with more than two other lexical items.

Finally, this type of formulae is similar to others as well; it has different functions in speech and serves several discourse purposes, the next table adapted from the work of several researchers like Firth (1950), Sinclair (1991) and, O'Dell and McCarthy (2008):

Collocation Function	Example	Meaning
Collocations with cause and effect	The president said it would take time for the reforms to produce the *desired effect.*	The wanted effect.
	The finance ministers' decision to raise income tax *provoked an outcry*	Caused a lot of public anger.
Collocations of stopping and starting	The new teacher *soon put a stop to* bad behaviour in class.	Used about unpopular activities or habits like crime.
	Jasmine suddenly **broke into** song.	Started singing
Collocations used to describe groups and amounts.	Words used in describing groups of animals for instance depend on the animal we are talking about.	*Pack of dogs or wolves. A swarm of bees. Flock of birds. A pod of dolphins*
Collocations describing feelings and behaviour (amount).	I did not detect *even a flicker of emotions* in his cold eyes.	Flicker suggests a brief expression of emotion.
Collocations related to food.	… Freshly made soup of the day, with *a hunk of bread*	A thick slice of bread, cheese or meat.
Collocations indicating comparison and contrast.	There is *a world of difference* between the two jobs.	An enormous difference.
Collocations used while making an effort.	Mike has been making *a determined effort* to save money.	A very serious effort.
Collocations used in careers advice.	*"Reap the rewards"*	Be rewarded
Collocations used in social English.	*"Are you up for …?"*	Would you like to …
Collocations used in discussing issues.	In a Political topic: "These politicians can never *give a straight answer(1)* they are great in *dodging the questions.(2)*	(1) They cannot be direct and honest. (2) They are good in avoiding questions.
	In communication: " let me frame the question	Formulate the question
Collocations used within negative situations and feelings.	Common problems and difficulties: "Billy hit his sister in *a fit of jealousy*"	Jealous in a certain situation according to an act or behaviour.
Collocations used within positive situations and feelings.	Anny heaved *a sigh of relief* as she saw Adam step off the plane.	Happy feeling that something bas has not happened.

Table 2.5: The Different Functions of Collocations (O'Dell and McCarthy, 2008, p. 52-60)

To sum up, collocations are one of the most important types of formulaic language because of their frequency of occurrence during speech and writing; in addition to the great role they play in developing foreign language learners'

conversational competence and sounding native-like in most communication contexts.

2.8.3 Phrasal Verbs

Sometimes, and according to some researchers, phrasal verbs are a subcategory of idiomatic sequences because of the figurative meaning they hold as they can have a literal (interpreted from the word's components) or a non-literal meaning. Phrasal verbs are widespread in terms of usage and everyday speech, they are verbs connected to a preposition, a particle, or both. Wood (2015, p. 48-49) puts the following as the forms phrasal verbs take:

- Verb + Particle (Particle phrasal verbs):
  - You should bring that up at the next meeting.
  - Come over and let's hang out for the afternoon.
- Verb + preposition (prepositional phrasal verbs):
  - Help me look after Jake's dog for the weekend.
  - Other children often picked on Sebastian.
  - What if you run into your ex-wife at the party?
- Verb + particle + preposition (particle-prepositional phrasal verbs)
  - I am not putting up with any more outbursts from her.
  - Jane is looking forward to a long sunny vacation.
  - The kids loaded up on chocolates before we got there.

Liu (2008) defines three criteria to help determine phrasal verbs as follows:

- We cannot insert an adverb between the phrasal verb components, we say: The kids *loaded up on* chocolates before we got there; instead of, the kids *loaded <u>slowly</u> up on* chocolates before we got there.
- In a sentence, the particle of a phrasal verb does not take the front placement, e.g. <u>*Up with*</u> I am not *putting* any more outbursts.
- A phrasal verb does not come with a full literal meaning, it has to hold a certain degree of figurativeness in its meaning.

To sum up, phrasal verbs are a special type of formulaic sequences since we only find them in the English language. We commonly use them in informal and everyday discourses. For example, we tend to use *get together* rather than *congregate,* or we use *put off* rather than *postpone* since it seems like it saves time to generate a new item as it saves the correct and accurate meaning intended. Phrasal verbs are among the highly used formulaic sequences among native speakers and we focus on them more because they occur constantly in radiotelephony on routine and non-routine situations.

2.8.4 Other Types of Formulaic Sequences

We devote this brief section to other types of formulaic sequences that are both less discussed and researched and less important for our case of study like speaking of proverbs as a part of formulaic language and its inexistence in aviation radiotelephony.

2.8.4.1 Congrams (Non-Continuous Collocations)

Wood (2015) defines them as any other kind of formulaic sequences; congrams are a combination of two or more lexical items (p. 49). Conversely, these items are apart, i.e. the constituent words are separated within a sentence by other words; thus, they are non-continuous formulaic sequences.

2.8.4.2 Lexical Phrases

This specific type of formulaic language seems to interfere with other types. Nattinger and DeCarrico (1992, p. 38-45) discuss four types of lexical phrases:

- Polywords: which function as single words with no flexibility, variability, or lexical insertion; they include two-word collocations (*for the most part, so far so good*).
- Institutionalised expressions: they come in a sentence length, invariable, and continuous mostly. (*A watched pot never boils, nice seeing you, long time no see*).

- Phrasal constraints: they are mostly continuous in pattern, and they allow variability for lexical insertions, words or phrases. (*a __ ago; the __er, the __er*)
- Sentence builders: they allow full sentence constructions with fillable slots *(I think that X___) (not only X but also Y).*

2.8.4.3 Compounds

These are more of a word combination in formulaic language studies; that is to say, a compound is a combination of two existing words that comes up with a special meaning (Hacken, 2004). According to Wood (2015) and based on the work of Williams (1981) compounds show asymmetry, as the second word labelled as the head or the core of the combination. As an example: *Desk computer* describes the type of the computer, and *computer desk* describes the type of the desk. The non-head serves to categorize the headword as the latter represents the type. The head part is exposed to certain rules like pronoun reference and has some flexibility on the lexical form basis. There are three parts of compounds:

- **Closed forms**: the combination is written as one word, ex: *secondhand, notebook, childlike, and native like.*
- **Hyphenated forms**: the two words are linked with a hyphen, ex: *mass-product, mother-in-law.*
- **Open forms**: the two words are written separately, ex: *post office, or real estate.*

Words are compound more often nowadays and they change with time; two words might be in a hyphenated form then be joined to form a single word. Wood (2015) believes that, frequently, even experienced writers with a good educational background check the compounds types via dictionaries and online resources.

To conclude, there are other parts of formulaic language that comply to the criteria set by experts in determining prefabs; however, we intend to discuss the most important ones and the types that interest and meet the terms and objectives of our research. Among the types we did not discuss in details, there are proverbs,

metaphors, lexical bundles, routines, and preferred ways of saying things. As we can also notice formulaic language in ritualised events, structured events like in weather forecasts, and even the speech of people with language acquisition disabilities like aphasia.

2.9 Functions of Formulaic Expressions

As it takes a great part of plain English, formulaic language serves nearly the same functions on everyday speech; also, Schmitt (2002) believes that it realises other different functions as follows:

- **Functional use**: where the foreign language learner develops a number of speech acts like apologising, complaining, and making requests.

- **Social interaction**: the purpose of an interaction or a communication does not always aim to information exchange; sometimes, people tend to learn about someone or something by being engaged in a friendly conversation to show social solidarity. Interlocutors lean on non-threatening acts to keep the flow of the conversation (informal spoken conversation) and avoid any breakdown of communication. For example, speaking about the weather as an ice breaker (*nice weather today isn't it*), or agreeing with the interlocutor (ah I see what you mean, I have got that yes).

- **Discourse organisation**: formulaic sequences help organising both written *(in other words, in conclusion)* and spoken discourse *(on the other hand, as I was saying).*

- **Precise information transfer**: we use technical words or expressions exclusively in a certain context or field, they provide a specific meaning for that specific area or situation like a *scalpel* is a special knife used only in medicine. But this is not quite restricted to single lexical items, Schmitt (2002)

> Fields often have extended phraseology to transact information in a way that minimizes any possible misunderstanding. For example, in aviation language, the phrase "Taxi into position" and "hold" clearly and concisely conveys the instructions to move onto the runway and prepare before departure, but to wait for final clearance for takeoff. (P. 32)

As a result, formulaic language grants most of language functions found in everyday language, formal or informal. However, it would be very helpful for foreign language learners to develop their pragmatic skills, communicative competence, and be well accultured to avoid any communicative breakdown with native speakers.

2.10 Problems of Misunderstanding Caused by Formulaic Language

Researchers recognise well that oral communication is a vital aspect of human life in fulfilling ones' needs and wants. Thus, any break down of communication may lead to losing the chance to do so. More importantly, it is possible that communication breakdowns will put one of the interlocutors into difficult situations and even crises. English as a lingua franca is a communicative means that helps to fulfil basic communicative needs between interlocutors from different linguistic backgrounds. However, mastering the language to a certain degree does not seem to be of interest for professionals/language users in different fields.

The researcher noticed the latter on several cases of Algerian pilots. Even though the ICAO has made clear-cut decisions towards reaching fluency and operational levels in English language usage, pilots still consider this requirement as a secondary objective en route for becoming a flourishing career. The fluency and language mastery required by the ICAO has critical importance for non-routine situations like incidents and accidents where plain English is desperately called for.

Generally, formulaic sequences occur in daily conversations, be it casual or professional. An example of a job seeker applying for an occupation for a foreign company; during the interview, native-speakers or advanced non-native speakers of

English may jot down some formulae here and there without realising as it is a sign of practice and proficiency. While the interviewee is being in such situations, s/he must realise the exact meaning of such formulae, their situation-bound meaning, and acquire some pragmatic skills to provide a well and accurate response.

More importantly, in aviation, there is neither time to think, nor options to choose from while communicating. On critical situations, pilots and air traffic controllers should keep their responses short and clear. Nevertheless, aviation phraseology does not cover all non-routine situations and experts in this field assert and well document repeatedly that plain English takes place most of times to solve these issues. Accordingly, native speakers tend to deviate towards plain English and use several formulae that may not be accurately interpreted by non-native speakers of English then lead to catastrophes (see 1.6.2).

- **Sources of Acquisition Problems and Complexities**

Even though formulaic sequences are holistic in nature, they have specific characteristics and qualities (see 2.5.5.1). Foreign language learners face difficulties in acquiring these prefabricated chunks of language and more significantly on processing and responding accurately. To be able to acquire, process, and use these formulae and sound native-like; therefore, avoid any kind of breakdown of communication. The reader may notice that the problems of the processing and use of formulae by foreign language learners have direct link with the nature and characteristics of formulaic sequences (see 2.5.5.1). The most faced complexities include the following:

- The structure of formulaic sequences presents a difficulty for foreign language learners in terms of acquisition and processing mostly. Prefabs are usually two morphemes long, hence the holistic nature of acquisition and use. In addition, they seem to be more grammatically advanced than novelty language; and, they consist of units that are either too sophisticated or not sophisticated enough for the situation in hand.

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- As for the form of the utterance, these fossilized forms are of greater length and complexity. Their syntactic irregularity may confuse the reader into deducing the meaning out of the formula, or doubt it as a faulty utterance (for intermediate language users). Then, when learners acquire the utterance as a whole, they must adapt to the form invariance of the sequence or other similar formulae and should not modify or edit neither the grammar, nor the structure underlying the sequence (no productivity/creativity).

- Similar to syntactic irregularity, semantic irregularity presents a pitfall for EFL (English as a Foreign Language) learners in general. Prefabs lack semantic transparency, they require the reader/listener to understand the notion of formulaicity to be able to realise that formulae, commonly, are situation-bound utterances (situational independence), and they help adopting some pragmatic skills.

- As we have discussed before, one of the main functions of formulaic speech is (specific topics). Some formulae occur in specific domains (register-bound) and may oblige the language user to adopt a number of community-wide formulae to feel involved, and thus acquire more related sequences.

Other factors the researcher discusses thoroughly to give more insights on the issues faced by EFL learners in acquiring and using formulae, they are as follows:

- Shumann's acculturation model (1978) has a noticeable effect on the understanding and acquisition of formulaic sequences. As many of them are situation and register bound lexical units, being culturally (culture, traditions, etiquette, and social norms) adapted to the target language may provide more help for learners to understand more accurately these formulae and avoid communicative distortion.

- Cultural diversity may put the learner/user in awkward situations with what contradicts with his beliefs and principles.

- Mother tongue interference has a negative effect for learners in learning foreign languages. Specifically, in acquiring formulaic sequences because of negative transfer and inaccurate translation. (This issue is being treated by the researcher through creating a special ''android'' app for the matter).

- Keeping track with native speech is rather a significant complexity if the listener cannot understand higher speech pace s/he may lose control over detecting formulae in native speech.

Eventually, foreign language learners will overcome these issues by first, understanding the notion of formulaicity, nature, and characteristics. Additionally, EFL learners should be exposed to a large load of native speech; and preferably less formal input like on TV shows and movies.

2.11 Teaching and Learning Formulaic Sequences

After discussing the nature, characteristics, and occurrence of formulaic sequences; the researcher takes into consideration the issues faced by foreign language learners in noticing, acquiring and using formulaic sequences to talk about different perspectives for the applied acquisition strategies and the teachability of formulaic sequences. In this part, we discuss a number of tips and hints to help foreign language learners reach communicative competence, thus fluency, as required for our sample study for their careers. Later in this dissertation, the researcher provides a detailed explanation and exemplification on the application of these tips, worth mentioning, the use of the lexical approach as a teaching method, and dictogloss and shadowing as teaching techniques.

The researcher believes that the initial phase foreign language learners should go through his that they must understand what formulaicity is. In other words understand formulaicity as a notion, to raise awareness on the formulaic nature of language, and what can a formula be like. This would make them acquire most of characteristics and the holistic nature of lexical bundles as a basic phase of the whole process.

The grammatical irregularity and the "odd" word formation of formulaic sequences would not be an issue after the first phase. What strengthens it though, is the practicality phase that comes after. The latter consists of studying and analysing different parts of formulaic language, preferably using a corpus inspired by original material like the series by McCarthy and O'Dell (2002, 2004, and 2006) that helps learners differentiate between different functions of formulaic sequences like phrasal verbs and collocations.

On the other hand, teachers encourage learners' exposing more often to native speech. Be it in movies/talk shows or written materials. The former presents a suitable means of noticing and practicing formulaic sequences as the learner can notice how formulae are used and more importantly, the contextual meaning of the lexical bundle that helps them detect the manner and pace of speech the formulae occurs. Eventually, this will help EFL learners develop their pragmatic skills and be more communicatively competent and fluent.

Finally, the general knowledge of the learner plays a major role in developing his/her general language skills to avoid breakdown of communication. Being up to date and adopting the target language culture and social norms, can help EFL learners understand most of formulae and hints around them in social media, news or natives speech.

The researcher, in this part, attempts to summarise some of the most important tips that an EFL learner can depend on to develop his formulaic language understanding and reach a successful acquisition and use process of these sequences. However, we will discuss more the teaching side of formulaic language and if really, formulae are teachable in addition to different methods and technique serving well both teachers and learners. All of the latter based on an ESP context.

2.12 Translating Formulaic Sequences

It is quite apparent now that learners perceive and acquire formulaic sequences as chunks of language. Besides, each single ready-made utterance is memorised and used as a whole; thus, serving a specific function. This raises a question on the

translation of these sequences to other languages, Arabic as in our case of study. Are there specific utterances' translations from English to Arabic and would they serve the same or a similar function?

Understanding the notion of formulaicity helps EFL learners reach fluency; thus, being communicatively competent. Formulaicity as one of the important aspects enhancing communicative competence requires a certain linguistic competence to shorten the path towards language proficiency. By linguistic competence, the researcher refers to basic control over a number of language formations, vocabulary, and grammar. All foreign language learners actually need this. Therefore, it would not be too complicated to set on the bases for successful and general formulaic language knowledge. We focus on enlarging learners' vocabulary vessel and their grammar competence because the former, helps students recognise most of formulae especially in oral communications. These prefabs mostly come in unorganised, long, and complex forms in addition to their irregular and changing patterns (helps more in collocations). As for the latter, being familiar to several grammatical structures and tenses helps learners avoid confusion when noticing more grammatically advanced, complex, or irregular formulae.

The researcher has noticed that with the change and growth of language in general, and the birth of formulaic sequences in common talk and different fields, learners should read and listen to materials from different disciplines to be familiar with formulaic sequences in more than general English. The researcher discusses an example in this paper with aviation English and how their phraseology is mostly prefabricated; how important formulaicity is to their fluency that stands as a career requirement for professionals in this field. Hence, being acculturated; i.e. being familiar with target language culture and social norms (general knowledge), besides being acquainted to different fields like aviation or forensic English is of a great assistance in reaching language proficiency grasping and using learnt formulaic sequences.

In her work assessing the translation of a short corpus from Spanish to English by professional translators, Fernandez-Parra (2005) comes up with seven different translation errors:

- Pragmatically incorrect translations
- Selection of incorrect collocate
- Ungrammatical translations
- Code-switching errors
- Semantically incorrect translations
- Missed formulaic expressions
- Incorrect omissions

For her study, which can be generalised to other language users or languages, it is noticeable that those translators had some difficulties in noticing formulaic sequences. However, translating formulae according to their function on written passages would be, to a certain extent, a good strategy to pursue.

Fernandez-Parra (2005) admits that the accurate translation of a formulaic sequence is not necessarily another formulaic sequence. What is more important is keeping an accurate meaning of the original text, and the same goes for any part of speech in oral communications. Keeping an accurate meaning might be throughout a formulaic sequence; but if the sequence's exact form and meaning equivalent is absent in the target language, it is quite acceptable to seek the general meaning or function of the sequence to keep the coherence of the text and the intended general idea.

To sum up, prefabricated chunks of language from the source text do not necessarily require another chunk in the target text or speech. What is required is to keep the coherence, meaning, and function of the formula.

2.13 Importance of Formulaicity in Relation to Fluency

We store words as individual items in our mental lexicon; however, recent studies have shown the same processing and memorisation of formulaic sequences bypassing the grammatical and word selection process, and directly to the long-term

memory instead of the working memory. As stated earlier, this on the same line of the holistic nature of the sequences and also their phonological cohesion and frequency to the ear of the language learner.

The most important aspect of learning formulaic language and its nature is by far the fast processing of such lexical bundles. Wood (2015) asserts that there is a raising interest and support for formulaic language to be faster in processing than non-formulaic language, i.e. novel language.

As a result, faster processing means accurate comprehensive skills and a more stable speaking pace, which leads the language learner to be communicatively competent; thus, a fluent speaker. The latter is the perspective we support in this study since it is vital for our subjects' aeronautical communication in avoiding any misunderstanding that may lead to catastrophes in terms of misleading information in short periods as the following part elaborates.

2.14 The Importance of Formulaicity to Aviation English

We can deduce that these formulae or the notion of formulaicity in general is highly required for non-native speakers as in our case of aviation professionals. This is because:

- first, the latter are exposed to a large amount of native speech, more precisely on advanced ranks like being upgraded from national to international flight level (the use of English is required), and more importantly the use of plain English in non-routine situations like unusual circumstances or emergencies as the aviation phraseology does not comply these conditions.
- Second, and according to Conklin and Schmitt (2012) and Assassi and Benyelles (2016) the acquisition of formulaic sequences develop L2/foreign language learners' communicative competence, thus, fluency. Moreover, according to the ICAO, linguistic requirements (see 1.5.3), fluency is highly required and it determines the language level of the aviation professional.

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- Third, aeronautics' professionals around the world (natives included) should take and English language test before applying for a job or even while in-service (see 6.5.1).

➢ Formulaicity and Aviation English Tests

There are several types of tests adopted or adapted by different universities or companies for testing their candidates (see 3.6). All of these tests should meet the linguistic terms put by the ICAO, assessing fluency included. In our case, there are other types of tests available, but Algerian aviation professionals mostly take the EALTS (English for Aviation Testing System). This test fulfils the linguistic requirements of the ICAO and considers fluency on assessing the candidates' language performance. On an unorganised interview, two of the nationally certified assessors for the EALTS assert that different formulaic sequences, when used accurately by candidates, put them on a better place to succeed and enhance their scores on the test since it makes them sound confident, fluent, and have a native-like proficiency.

To sum up, this work intends to ensure any flight's safety by minimising the human communication errors and misunderstandings, as they are a primal cause of incidents/accidents. Time is crucial in radiotelephony communications especially in busy airports; therefore, we are determined to eradicate this communication issue by enhancing non-native speakers' pragmatic skills and fluency through formulaicity, since they may cause misunderstanding, time consumption, and then unfortunate outcomes.

- Acquisition and Processing

Researchers and scholars vastly acknowledge the development of formulaic language in second language acquisition (L2) for the last couple of years. More research is being conducted nowadays on the acquisition and processing of formulaic sequences. We discuss the case of Algerian aeronautics professionals as a part of second and foreign language learners; however, researchers need to conduct more studies on different ESP divisions (English for Specific Purposes) in relation to the

development of formulaic language on one hand, and its crucial importance for reaching fluency in target/professional situations on another.

In his elaboration on the development of formulaic language among the L2 community, Okuwaki (2014) believes that formulaic sequences became an important part of native discourse and it helps non-native speakers of English to appear native-like. On the same train of thought, this is widely supported by H.Nguyen (2014), T.M.H. Nguyen and Webb (2016), and Van Lancker Sidtis and Yang (2016). In addition, investigators have been extensively studying the phenomenon nowadays.

Among those studies, researches have been discussing the acquisition of formulaic sequences and its difference for native and non-native speakers of English. We may ask why? Why do we have to study the acquisition and processing of formulaic sequences? It might have the same answer for the broader question why do we study formulaicity at all. Which is put according to Conklin and Schmitt (2014, p. 46) as "It is becoming increasingly clear that formulaic language is an important element of language learning and use. Perhaps the best evidence for this is simply its ubiquity". In other words, the large number of formulaic sequences in different fields encourages researchers to dig deeper into every detail about the phenomenon.

Formulaic sequences are recognised for their fixed, routinised, stereotyped, and of course specialised conditional usage (Hallin and Van Lancker Sidtis, 2015, p. 2). This adds up to the holistic nature and frequency of formulaic language to realise the acquisition.

Apart from the recent studies conducted by Yorio (1980) Schmidt (1983) Assassi and Benyelles (2016) and Ortaçtepe (2013), fewer researchers investigate a formulaic sequences' effect on adult non-native speakers' oral production of language. However, the same effect researchers focus on more numerously on children and adult native speakers, worth mentioning the work of Sidtis, Canterucci, and Katsnelson (2009), Bridges and Sidtis (2013), and Yin (2013); or non-native children as in Myers, Hooper, and Mitchell (1998). All of these studies, and others, provide us with insights to investigate the effect on adult non-native speakers in an ESP context.

Wood (2015) states that less evidence is spotted on formulaic language in adult second language acquisition since adults in general lean on the analytic approach in language learning, and that is what we intend to clarify for our participants in order to enhance their holistic approach of language learning, accurately enough as it is required in formulaic sequences acquisition.

Schmidt (1983) results on studying formulaic language acquired by Japanese adults living in Hawaii are encouraging. They resist error correction and come to accept the holistic peculiar forms for prefabs as far as grammatical accuracy is concerned. This has led the research participants to improve their language performance and be acculturated using formulaic language.

These outcomes make us wonder how the acquisition process happened. Ellis (1996) and Wood (2015) clarify this aspect, by stating that the short-term repetition and rehearsal assist the long-term language aptitude. Likewise, frequency (as a main characteristic of FSs) helps learners store the formulae in the long-term memory as a whole for an automatic use in an accurate manner, in a direct relation to the intended meaning and at the precise situation/context. Finally, this ends up with a fluent language use and native-like language proficiency.

We close this part by stating some of the factors that may play a role on the acquisition and processing of formulaic sequences by different non-native speakers of English. Adult language learners might be more analytic than younger language learners (children) as in (breaking chunks and analyse them as separate units), and that hinders the holistic acquisition, processing, and memorisation of the lexical chunks. In addition, adult learners have more L1 knowledge and mother tongue interference may hurdle their language development process in general. Finally, as Wood (2015) infers, the educational degree obtained and the one studying for may be of an important role as well.

2.15 Communicative Competence

Hymes (1966) was the first to discuss communicative competence as a reaction to Chomsky's (1965) peculiarity between competence and performance. The debate

has been, for a long time, occurring and reoccurring regarding the linguistic competence and the communicative competence, more importantly in second and foreign language teaching. More scholars lean towards communicative competence as a superior model of language pursuing the steps of Hymes and in opposition of Chomsky's beliefs. This was the first step towards a new era of communicative language teaching for EFL (English as Foreign Language) learners in general.

Hymes (1972) defines communicative competence as the appropriate use of language to other participants and to the given social context or situation. In other words, there is a link between; first, the linguistic appropriacy in terms of speech, communication, basic organisation and second, the socio-cultural knowledge of the target language that deals with the pragmatic and contextual meaning of the utterance.

Communicative competence

| Grammatical competence | Discourse Competence | Sociolinguistic competence | Strategic competence |
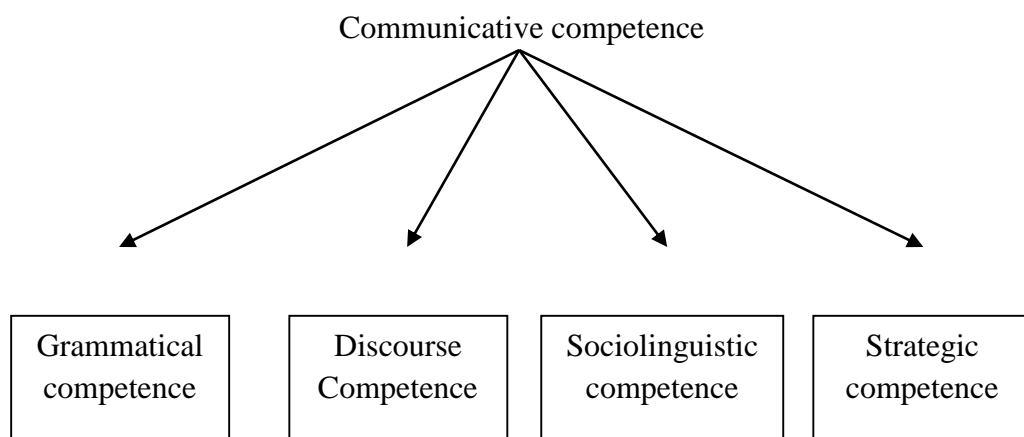
Figure 2.4: Canale and Swain's Communicative Competence Model (1980)

As the figure above shows, being communicatively competent can be a complex path for foreign language learners. The former are supposed to ensure an appropriate grammatical combination first and finally be strategically competent to ensure the message delivery, reception, and avoid and kind of breakdown of communication.

2.15.1 Communicative Strategies (CSs)

Researchers study communicative strategies from different perspectives. Tarone (1980) studies CS from an interactional viewpoint. Brown (1994) investigates CS from an error resources perspective; whereas, Færch and Kasper (1983) look at CS from a psychological side.

Apart from these perspectives, and as a definition, Selinker (1972) who proposed first the concept of communicative strategies defines it as a way a learner attempts to express an accurate meaning in spontaneous speech using a limited target language system. Lately Cohen (2004, as cited in Wei, 2011) defines CS as a systematic attempt by the learner to express meaning by a target language in which the suitable systematic target language rules have not been formed." Thus, we can conclude that we use these strategies to avoid any misunderstanding or breakdown of communication. Professionals must avoid both of them in aviation English through radiotelephony because of the limited speech time and the accuracy required especially in emergencies or unusual circumstances.

2.15.2 Strategic Competence

Being strategically competent for a language learner or user is being able to use communicative strategies and techniques to ensure the accurate message/meaning delivery or reception. In addition, it depends on the manipulation of language-by-language users (native or non-native) in order to achieve communicative goals and objectives (Assassi and Benyelles, 2016).

Canale and Swain (1980) believe that strategic competence relies on verbal and non-verbal communicative strategies in order to compensate any breakdown of communication caused by performance variables or insufficient competence. On the other hand, Yule and Tarone (1990) think that, it is the language user's capacity to select an accurate and effective approach for performing a conversational act. The act that enables the receiver (listener/reader) to recognize the exact intention. From both perspectives, we can conclude that the main objective of developing such skill is to

avoid any communication failure and to ensure the successful and precise message transfer.

- **Categorization of Communicative Strategies**

Literature discusses different categorisations and taxonomies since communicative competence came to exist as a notion in 1966. The ones we mentioned earlier, Tarone (1980), Færch and Kasper (1983), and Brown (1994) discuss CSs from different perspectives. Nonetheless, the closest classifications to our research subject, sample, and objectives, are Tarone's interactional/social based taxonomy and Færch and Kasper's psychological perspective.

The former includes some categories that do not meet the terms of our research requirements. Even if some of the strategies she mentioned are helpful for pilots and ATCs to ensure accurate message deliveries. For example paraphrasing in the form of (approximation, circumlocution, and word coinage) or transfer in the form of (appeal for assistance). Other CSs cannot assist aviation professionals in the communicative form their job requires (radiotelephony). Worth mentioning, transfer strategies like (literal translation) as the pilot does not share the same linguistic background as the ATC in international flights for instance, but most of Algerian pilots may take advantage of this strategy for their own good by using French, which they mostly master, and as it is closest to English than Arabic. Same goes for language switch as well. On the other hand, strategies like topic avoidance, message abandonment, and mime are not useful for such type of communication, and may lead to catastrophes (breakdown of communication) if applied in incidents or unusual circumstances. For example, a pilot cannot use mime as non-verbal strategies since radiotelephony is an oral only communication and the aviation's professionals cannot see one another.

Second, Færch and Kasper (1983) discuss CSs from a psychological viewpoint. They believe that CSs are psychological processes and they present a solution to individuals' processing issues rather than the speaker/ hearer's mutual problems. This perspective might present a stronger and more related aspect to our

research since we intend to develop the learner's communicative competence through formulaic language that helps foreign language learners' individual development of language processing. These researchers divided CSs into two major aspects, achievement communicative strategies (promote language acquisition), and reduction communicative strategies (reduce language acquisition).

a) **Achievement communicative strategies** help learners avoid breakdown of communication on the planning phase mainly because of insufficient linguistic resources (Wei, 2011). This aspect consists of strategies like code switching, interlingual transfer (IL), IL based strategy (generalisation, paraphrasing), cooperative strategy, non-verbal strategy (already discussed above in mime). The researcher states most of them above; and as far as our study is concerned, IL transfer may present a noticeable issue like on the phonological level. To elaborate, a Chinese or a French pilots might be misunderstood by and English language speaker since they have difficulties pronouncing the sound /θ/, thus *I am thinking* and *I am sinking* may cause an enormous misunderstanding for aeronautics professionals' especially in emergency situations.

b) **Reduction strategies** native speakers use these strategies to produce a simplified version of their L1 to go with lower receptive level of the non-native speaker. The latter use these strategies first, relying on former language acquired (insufficient language background), and second to avert the incorrect, inaccurate, and non-fluent language production. These strategies may include formal reduction strategies that can help EFL learners avoid any linguistic handicaps because according to Varadi (1980) he believes that second/foreign language learners trust that eliminating some formal elements do not interfere with the semantic transmission as this exclusion can increase accuracy, efficiency, and fluency.

From another view on the same matter, Blum and Levenston (1978) encourages foreign language learners to rely on reduction strategies when it comes to their lexical system. First, learners might be exposed to difficult lexicon in pronunciation, irregularity, or low frequency. Secondly, they may set restrictions and

limitations within the communication (for other interlocutors) and at a specific field or context in terms of morphology and syntax because they find it difficult to cope with the linguistic difficulties at that situation.

The second type of reduction strategies is functional reduction. Apart from the lexical elimination, learners can depend on broader reduction strategies like message abandonment, topic avoidance, and meaning replacement. These strategies mainly help to avoid any difficulties performing specific speech acts. Færch and Kasper (1983) believe that these strategies assist learners to evade engaging is communications including such acts or avoid the acts themselves within a conversation. The general objective behind the use of these strategies is to save face, be polite, and recognise the social distance.

To sum up, some strategies interfere and are available in different taxonomies. A number of them are quite beneficial for our case study, and others to avoid by our sample particularly in non-routine situations. What is mostly important for us is to ensure the ones tightly linked to our research seeing that we have provided information on them in this section.

2.15.3 Strategic Competence in Aviation English

In aviation, ensuring flights safety is a prime objective for the global aeronautical community, and a successful communication that ensures message delivery and understanding is a major factor to ensure safety. Aeronautics professionals go through an extensive educational career. Moreover, as well known now, English is a vital subject on this matter. To get a job or to renew their licences or contracts, these professionals have to sit for the English language test that fulfils the ICAO language requirements (see 6.5). The rating scale in these tests relies on a number of holistic descriptors that we will discuss in details later on. To clarify more, Emery (2016) elaborates through ICAO (2010b, section 4.5.5) that:

> The ICAO Rating Scale has a distinct aeronautical
> radiotelephony focus; it addresses the use of language
> in a work-related aviation context, voice-only
> communications, using strategic competences for safe
> communications in case of complications or
> unexpected turn of events

Thus, what the researcher wants to focus on is the importance of strategic competence and communicative/conversational competence in general (fluency included) for the safety of flights and succession of the pilot's or other professional's career.

2.16 Conversation Competence, Fluency and English for Aviation Purposes

Reaching fluency through formulaicity is our main concern in this study. The ICAO sets fluency as a major linguistic requirement for aviation professionals. Thus, we propose formulaicity as a shorter path that abridges the linguistic requirement.

In this paper, we are dealing chiefly with the speaking skill and the listening comprehension since pilots and ATCs mostly need them within radiotelephony. According to its complexity, any working mechanisms should be detected and put under scrutiny for the sake of improving the oral communication (listening/speaking skill) Khodadady and Shamsaee (2012).

Formulaic language is a major contributor to foreign language learners' speech fluency. according to Wood (2008) it should be taken into consideration; not only because of its positive effect on avoiding breakdown of communication, but also because of its noticeable occurrence on native speech and corpora (in relation to our case of study), and also that formulaicity is what marks out non-native speakers as competent language users (Wray, 2012).

To elaborate, what interests us most on this matter, is that formulaic sequences help language learners/users avoid any breakdown of communication. Number of words uttered, pauses, fillers, speech rate, and pace all have a relation to formulaic

language (Wray, 2008). Accordingly, radiotelephony in aviation limits passing and receiving messages to the minimum and pays decisive attention to time management. However, in non-routine situations (incidents/accidents/emergencies), as time still limited, aeronautics professionals use plain English instead of phraseology. The former, mostly used by native speakers even in routine flight phases, consists of a considerable number of prefabricated chunks of language like phrasal verbs and collocations.

Thus, we focus more on defining the working definition of formulaicity for our sample population so they can recognise the notion of lexical bundles. This also will help them develop their pragmatic skills and be linguistically proficient. Elliot (2013) states that incorrect or incomplete pilot-controller communication through radiotelephony is a contributory or circumstantial factor in 80 percent of incidents or accident in aviation; hence, all of the processes we follow are set in order to avoid any break down of communication, especially in incidents or emergencies; thus, ensure flights safety

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2.17 Pragmatics and Formulaicity

As far as formulaicity is concerned, the data gathered and analysed by investigators for different research objectives and purposes (related to formulaic language) resulted a noticeable pragmatic development for EFL learners in general. Because of its peculiar semantic irregularity as one of the main characteristics of formulaic sequences, a great number of prefabs help foreign language learners develop their pragmatic skills to reach native-like language proficiency. Romero-Trillo (2013) believes that different speech acts come up as prefabricated chunks of language that hold an evident pragmatic sign.

Different experts on the field of second and foreign language acquisition believe in the importance of formulaic language for reaching language proficiency and native-like fluency. Al Hassan and Wood (2015) contend that formulaic sequences represent a large proportion of foreign language learners' linguistic repertoire (p. 52). Based on the works of (Boers and Lindstromberg, 2009; Wood, 2006, 2010; Wray and Perkins, 2000), they believe that, among other aspects of language proficiency, the sequences play a major role in developing speech fluency and pragmatic competence.

In relation to the pragmatic nature of formulae, Kesckes and Horn (2007) assert that the situation bound utterances hold a pragmatic trait that helps EFL learners be proficient as language users. On the same breath, Schenck and Choi (2015), in their work on the study of formulaic concepts and their impact on improving writing, they claim that the acquisition of formulae as situation bound utterances develop the pragmatic competence of foreign language learners. In addition, fundamental understanding of structure is not satisfactory without achieving an intended pragmatic function.

- **In Socialisation**

In relation to our case study, formulaic language assists foreign language learners into being socially active through smooth speech, understanding, and no communication breakdown. The latter comes as a major issue for aeronautics' professionals. In radiotelephony, speaking time is quite limited, pilots and air traffic controllers should be as clear (fluent) as they can. This might be fulfilled in routine situations through basic aviation phraseology; nevertheless, non-routine situations such as emergencies, urgencies, incidents; and accidents require more information using plain English on the same limited time, taking as an example when a plain is heading for land as the pilot has partial loss of control over his/her plane. The plain language we mentioned has a considerable number of formulae as the researcher stated in this part.

In his comparative study that consists of testing the nativelikeness of speech and fluency between two groups (Turkish focal group and an American control group), Ortaçtepe (2013) claims that the American group did not only receive higher ratings but also the group has used more formulaic sequences, and that was a main reason for the higher ratings. Thus, plain English consists of a considerable proportion of prefabricated chunks of language.

As a result, formulaic sequences understanding and use by non-native speakers more specifically, aeronautics' professionals, is a necessity for a thriving radiotelephony communication especially when native speakers are involved.

To conclude, Burdelski and Haruko-Minegishi (2012) insist on the positive impact of formulaic sequences on the social perspective and its advantages on

successful communication. Overall, formulae are an indication of speech naturalness and native like proficiency. Moreover, as far as our sample population is concerned, that is quite the requirement needed for a successful radiotelephony communication particularly on non-routine situations.

2.18 Conclusion

This chapter discusses the two main research variables, formulaic language and communicative/conversational competence. It is quite noticeable now that formulaic language has made a step forward and became one of the most researched topics nowadays. This is a result of its great importance to language acquisition and development. We have focused more on its effect in relation to communicative competence and more precisely on fluency as a part of communicative competence.

As far as our case study is concerned, formulaic language can provide a great deal of assistance for EFL learners' language production; also, and specifically speaking, their oral communication skills on their different educational or professional careers.

The researcher discusses on the next chapter ESP situation in Algeria, in addition to aviation English and Aures Aviation Academy as a national institution.

CHAPTER THREE: Research Methodology

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3.1 Introduction

It is highly required for scientific researches to well organise the process and follow a systematic method. As a field of scientific research in English language teaching, ESP course design follows a set of ordered steps from using research tools to collect data for analysis to course design. The researcher follows a strict process in order to display a methodical identification and analysis of the situation where the language is used.

This chapter deals mainly with an overview of the methodology followed in this research. The chapter consists of two parts. The first includes a full review of the state of the English language within the aeronautics field worldwide and more specifically in Algeria. This helps the researcher to understand the impact of English on the aeronautics field, and identify the kinds of instruments are preferred to gather needed information.

The second part is devoted to the research methods used in conducting needs analysis, research tools, the sample of informants, in addition to a description of the advantages and drawbacks of tools used in needs analysis.

3.2 A Shifting Point (Communication Caused Catastrophes)

More than eight hundred (800) victims in addition to three crashed airplanes are the results of the major air crashes caused by breakdown of communication between pilots and air traffic controllers. The accidents took place on the following dates:

Dates	Aircraft(s)	Companies	Effects	Victims
1977	Two Boeings 747	KLM (Royal Dutch Airlines) Pan Am Airlines	Collided on the runway in Tenerife	583 victims
1990	Boeing 707	Avianca Flight	Crashed into a village due to fuel exhaustion near the JFK airport	73 victims
1995	Boeing 757	American Airlines	Flew into a terrain in Cali	159 victims

Table 3.1: Three Major Crashes Caused by Breakdown of Communication

These accidents proved that the recommendations and practices stated by the ICAO as far as the aviation English is concerned were not satisfactory. The main causative factor of these unfortunate events was determined to be the lack and insufficient proficiency of the English language (Přívorová, 2016, p. 7-8). Thus, the problematic lays in the use of plain English and reaching proficiency to ensure flights' safety in non-routine situations.

3.3 Three Major Ways Language Can Cause Accidents

ICAO (Doc 9835 1.2.2) presents the focal causes of accidents related to language failure (delivery or reception of messages-comprehension-) i.e., breakdown of communication:

- ***Incorrect use of standardised aeronautical phraseology***

The published ICAO standardised aeronautical phraseology proposes a general aspect of comprehensible unequivocal language production and reception.

However, different statistics and surveys reveal that 70 per cent of uttered speech acts do not conform to the suggested standards by the ICAO linguistic requirements (Přívorová, 2016, p. 8). The researcher discusses the matter in this study as the deviation from the aviation phraseology that is highly prohibited in routine situations especially while conversing with non-native speakers who may lack the pragmatic skills necessitated for a natural or plain speech. That is, most of times, used by naive speakers who do not comply with the phraseology in routine situations as non-native speakers do not have another choice rather than following it in basic and regular situations.

On the other hand, and by taking into consideration that the phraseology is designed basically for safety reasons, and its accurate usage is fundamental for a safe successful flight; still, it does not wrap up all aeronautical situations (especially non-routine situations-unusual/incidents/accidents), and neither does serve pilots' and air traffic controllers' (ATCOs) communicative necessities (ICAO, Doc 9835 1.2.4).

- ***Insufficient Plain Language Proficiency***

Plain English is necessary in non-routine situations, and the lack of proficiency may be the cause catastrophes as seen on the table above. One or both of interlocutors (Pilot and ATC) may fail to understand or deliver an accurate instruction or information using both phraseology and plain English. The misunderstanding might take the form of struggling to understand the nature of the issue or the inability to express concerns. The researcher focuses more on this matter by recommending the acquisition of the nature of formulaicity to develop the pragmatic skills of pilots and ATCs since figurative meanings and unusual words orders occur quite often in plain or natural language especially by native speakers.

- ***Using Multiple Languages in a Single Air Space***

The ICAO discusses this matter as one of its major concerns. Using more than one language in the same air space as noticed by the researcher in a recording from the Tower at Houari Boumediene International Airport where both Arabic and French

are used interchangeably for national flights and some international ones; while English is used for foreign aircrafts. This may not seem an issue for the Tower (ATC) on routine situations, but on non-routine circumstances, the context and results may differ. ICAO believes that this negatively affects the alertness of other foreign flight crews as they are also concerned about the tower's communication with other pilots around them (Doc 9835 1.2.6).

The unfortunate events in the aviation industry have led the ICAO community to act accordingly to minimise these issues related to communicative breakdowns as discussed next.

3.4 Presentation of the Teaching Learning Situation

Nowadays English has become a lingua franca, i.e. the language used between two individuals having a different linguistic background. In aeronautics, most of largely spoken languages like English, French, Spanish, and Arabic are used. In this case, the interlocutors (pilots and air traffic controllers) use it only when they share the same language. As Algeria engages in the process of globalization, it is inevitable to depend on English more often as it is the working language of international organizations, conferences, and the language of tertiary education.

The ICAO (The International Civil Aviation Organization) as an example of the leading and official international organization controls air traffic around the world with a large group of laws including the language used for communication in international flights. English has always been the official language of the ICAO. Nevertheless, in 2003, it has stated a requirement that every single pilot or ATC engaged in international flights should reach fluency. This law comes as a result of the repeated "deviation" of native speakers from using the official standard phraseology known by all aviation professionals around the worlds and shift to plain English.

Plain English refers to the simple form of language used by communicators and mostly native speakers when interacting with non-native speakers of English in our case. As simple as it sounds and as far as our research topic is concerned, the

plain English used by native speakers working in the aeronautics profession tend to include many formulaic sequences; more specifically phrasal verbs, collocations, idiomatic expressions, and preferred ways of saying things. Other parts of formulaicity like proverbs are excluded because of their absence in any records of communication consulted between pilots and ATCs.

Formulaicity is what marks out a competent/ fluent foreign language learner. Thus, reaching competence and fluency required by the ICAO for aeronautics professionals is reachable through acquiring a large number of formulaic sequences and understanding the notion of formulaicity. It is worth mentioning that the phraseology used by aviation specialists is considered formulaic as it is "… acquired, memorized, and retrieved whole from memory at the time of use" (Wray, 2008), which are the main characteristics of formulaic language (see 2.5.2).

In Algeria, there were more than five institutions/schools for aviation and aeronautics trainings. Currently, and in addition to the department of aeronautics in Blida University, Aures Aviation is the only working aviation school nationally, the leading school has seven training airplanes and very sophisticated equipment, simulators and staff. The training programmes they provide take from three to eighteen months depending on the students' desired training/diploma (see 1.7).

Their English language programmes takes place within the theoretical part they go through at the first phase. It includes courses of general English using (New Interchange) books series. Later, they are engaged in a new programmes acquiring Aviation terminology using McMillan English for Aviation (see 3.4). For their professional and work purposes, students are required a level four in English at a proficiency test organized by the company they intend to work at, in which they should also go through another brief training to acquire the aviation phraseology that is the most technical language used by aeronautics professionals.

Formulaic sequences are rare if not absent within the programmes provided by Aures Aviation School. That is to say, the reason we focus more on these sequences and the notion of formulaicity as it is the most appropriate process for reaching the

fluency required by the ICAO and that nearly 70% of the English language is formulaic.

3.5 Aviation English in Algeria

Aviation is an important factor that affects the development of countries. In Algeria, the aviation industry is steadily growing. According to the one of the case studies of the (RMIT "Royal Melbourne Institution of Technology" University) Royal Melbourne University of Australia (The University of Cambridge), Algeria's aviation industry is growing at a rate of over 12% per year. Additionally, Algeria's strategic geographical position allows it to a control a large air space with overhead traffic from both the Middle East and Europe. In addition, there is a significant and an increasing number of passengers for both domestic and international flights according to the same study discussed in this section. All of these factors require aviation companies to recruit more aeronautics' professionals and to make sure to train them well.

On the same train of thought, these aeronautics professionals have to be proficient in English and have organised trainings. For that matter, and in 2008, the Algerian Ministry of Transport has set collaboration with the Royal Melbourne University of Australia through a training called Language Solutions Algeria (LSA). This collaboration guarantees both language trainings and official (ICAO standard) testing for pilots and ATCs to be able to operate internationally. The end 2016 was the end of this collaboration. The Ministry of Transport has made a new collaboration with Aures Aviation Academy to provide English language instruction and testing. This academy is currently the sole provider for all aviation trainings in the country, Commercial Pilot Licence (CPL) and Airline Transport Pilot Licence included (ATPL).

3.6 Aures Aviation Academy

Aures Aviation Academy as a leading institution in the field of aeronautics in Algeria has made an immense improvement since its opening in 2001. The only

school in Algeria that provides an ATPL (Air Transport Pilot Licence) training programmes to its candidates recently adopted a well-recognised testing system used in the UK and many other countries to test students' English language called EALTS.

Aures Aviation Academy is the only school that provides all types of licences for pilots' training in the country. Since 2010, the school has acquired a certificate by the Ministry of Transport to be the exclusive provider of aviation trainings since all of Algerian pilots had their trainings abroad. The same year has witnessed the signature of contracts with the main two airline companies in Algeria (Air Algerie and Tassili Airlines) to train their pilots as well. The academy consists of its proper residency for trainees in addition to its hangar, fleet, flight simulators and experienced staff (ex-pilots and controllers) to ensure the most effective training for Algerian pilots.

In this school, candidates can enrol in many training programmes of their choice. ATPL and PPL are two examples of the programmes provided by the academy (See Appendix 07). Students can get licences to be pilots for commercial airline companies or private pilots. All of this does not depend on their choice only, but also on the training fees, required educational level (BAC+2), time allocated to the programme (6-18 months), a face-to-face interview with school administrators, and also the availability of pedagogical seats among the candidates as the school accepts only 12 students per training programme.

If the student fulfils all the schools requirements to be a candidate in one of its programmes, s/he will have a theoretical and a practical part to go through. The former includes fourteen (14) modules (English included). The teacher teaches English through two sections. First, ESP teacher uses the 'New Interchange' books collection (only from 1-4, level 0 excluded, see 3.4) to teach general English, this first section is divided into eight (8) levels (two levels per book), students are tested at each level and their succession is mandatory at all levels to finish up with level 8 general English. The latter would allow students to move to the second section. ESP teacher uses McMillan's English for Aviation as a textbook to teach more technical English for students. Worth mentioning, that candidates who studied abroad and

already having their licence should go through a special programme called "the refreshing programme- programme de rafraichissement". The academy provides the programme and, the Ministry of Transportation requires it since the ministry itself does not recognise foreign licences; thus, this programme is obligatory for them to apply for a job in Algeria.

In 2016, the Ministry of Transport trusted Aures Aviation Academy with the English language teaching and assessment for aviation professionals in Algeria. The academy has provided an extensive training for its language assessors to be able to teach and assess general and aviation English for Algerian pilots and other field professionals as well. The academy has made collaboration with Bournemouth University- United Kingdom (UK). The ICAO linguistic requirements have led many institutions and aviation/language experts to do more research and develop new and more accurate English language proficiency tests.

These tests need to meet the LPR (Language Proficiency Requirements) set by the ICAO following the rating scale and holistic descriptors as we have seen earlier (See table 1.1) so, this training was provided by British aviation English experts. The training included also the official training for using the EALTS (English for Aviation Language Testing System) to replace the RELTA as the final proficiency test. The ICAO recognises this test and provides accurate language testing for candidates all over the country.

The academy provides also, in accordance to the aviation-training programme, an English language programme that consists of both general then aviation English course. Both programmes are 120 hours in total. The teacher uses collections: New Interchange Series for GE and McMillan Aviation English as supporting materials. The English language programme takes place during the theoretical part of the training (9 months). The academy provides comfortable, organised and motivating learning environment and materials with a large selection of audio and audio-visual aids. So far, all parties are satisfied with the results, the academy staff, learners, test providers (EALT), and the Ministry of Transport are all pleased with development of the field in general and the aviation English in particular.

At the end of their training programme, students should pass a number of tests related to the company they apply for, medical checks, and of course the English language test.

Up until November 2015, Algerian pilots and ATCs did not have an official testing centre to take the language certificate from, just a foreigner who comes once a year and schedules a group of candidates to pass the test (RELTA) in collaboration with an Algerian aeronautics professional. Nowadays, AAA guarantees a quality and a highly recommended test (EALTS) that is available at any time for its candidates; in other words, operational pilots in companies who want to renew their English language licences, or novice pilots who want to acquire a licence to be recruited, can both provide a request for the academy to sit for the test. This school has set an agreement with the first airline company in Algeria (Air Algérie) to be the exclusive assessor of the English language for all the company's aeronautics professionals.

3.7 The English Language at Aures Aviation Academy

Within their English language programme, novice pilots at Aures aviation Academy go through a series of lessons taught communicatively using the "New Interchange" books collection written by Richards, Hull, and Proctor. The teacher skips the first book which seems according to her too simple and as all students have a minimum of five years studying the English language; worth mentioning that these books have no specific content on aviation (except few limited examples). After they complete their lessons using the "New Interchange books 1-4", they move to another step of their English language programme using "McMillan English for Aviation book" to learn the specific language needed for their future careers.

The reasons stated by the English language teacher at this school for choosing such programme, which starts from a pre intermediate phase, is that students come from different language levels and background. Furthermore, some of them did not use English for a long period, and finally that it is quite difficult to divide a group of twelve students and create a programme for each individual.

The English language at Aures Aviation School- Batna has a specific programme because of the vital role that English language plays within aeronautics generally and national/international air traffic specifically. Students have to succeed in sixteen achievement tests during their eighteen months training i.e. four tests for each book. If a student fails one test, he or she has to take it again.

The current syllabus proposed by the academy aims at its both sides, common core, and specialised English (ESP), at refreshing learners' memories and tackle basic language aspects such as basic grammatical structures and word formations. However, ESP course focuses on developing learners' knowledge on their subject. Thus, the syllabus aims at:

- Developing learners' knowledge on aviation English;
- Focusing on listening and speaking;
- Increase learners' vocabulary and work related lexical items;
- Help learners improve their pronunciation;
- Developing learners' use of language functions.

Finally, the materials used by the teacher include formulaic language like collocations, phrasal verbs, and idiomatic expressions. Nevertheless, the English language teacher asserted that as far as these expressions are concerned, she teaches and deals with them as a simple form of language; but most of the time avoided according to their complexity especially at the beginning of the programme. Nevertheless, the real problem here is that these expressions and the notion of formulaicity are ignored all over the programme at the school and even at further achievement tests taken by students for occupational purposes.

The reason why this presents a dilemma for us is that formulaic expressions represent no less than seventy percent 70% of the English language (Wray, 2003). Additionally, the ICAO requires them to reach fluency; and according to Assassi and Benyelles (2013) the knowledge of the notion of formulaicity in addition to a certain number or formulaic language classes and chunks helps non-native speakers of English reach fluency and be communicatively competent.

3.8   Objectives of the Study

Formulaic language has become the centre of attention for many researchers. In the field of ESP, only few studies took place. For this reason, we aim to uncover this subject and its relation to ESP and its positive effect on reaching fluency, as most aeronautics professionals who are non-native speakers of English still endure in establishing a conversation with natives. In addition, they face difficulties in their communications using plain English and focus more on their technical terminology.

In our case of study, the ICAO require that pilots and ATCs around the world should reach fluency, i.e., be able to comprehend and provide accurate data (messages) and be able to communicate effectively using plain English on non-routine situations where aviation phraseology is not sufficient. Fluency is reached with the help of formulaicity as it represents more than 70% of English language. Algerian pilots and ATCs do not pay much attention to this as they do to technical terminology, and their programme does not provide an assistance with the subject of formulaicity as it lacks any kind of formulaic sequences. Thus, our main research objectives are to:

- Show the importance of formulaic sequences to foreign language learners.
- Limit the scope of formulaic sequences needed by pilots and air traffic controllers.
- Illustrate the importance of formulaic language for reaching proficiency.
- Shed light on ways and methods to learn formulaic sequences.

3.9   Sample Population

The sample is an important part of scientific research; it is difficult for a researcher to fulfil his/her research objectives without having a carefully selected sample and depending only on unorganised sampling. In this respect, Dörnyei (2007, p. 96) defines sample as "the group of participants whom the researcher actually examines in an empirical investigation" and the population as "the group of people whom the study is about". The importance of the sampling process for the scientific

research is elaborated by Singh (2006, p. 81) "Sampling is indispensable technique of behavioural research; the research work cannot be undertaken without use of sampling".

To obtain the desired and accurate data, the researcher does not use arbitrariness in selecting the sample out of the whole population; however, this selection relies on strict scientific techniques. The following diagram by Singh (2006) elaborates different techniques of sampling used nowadays.
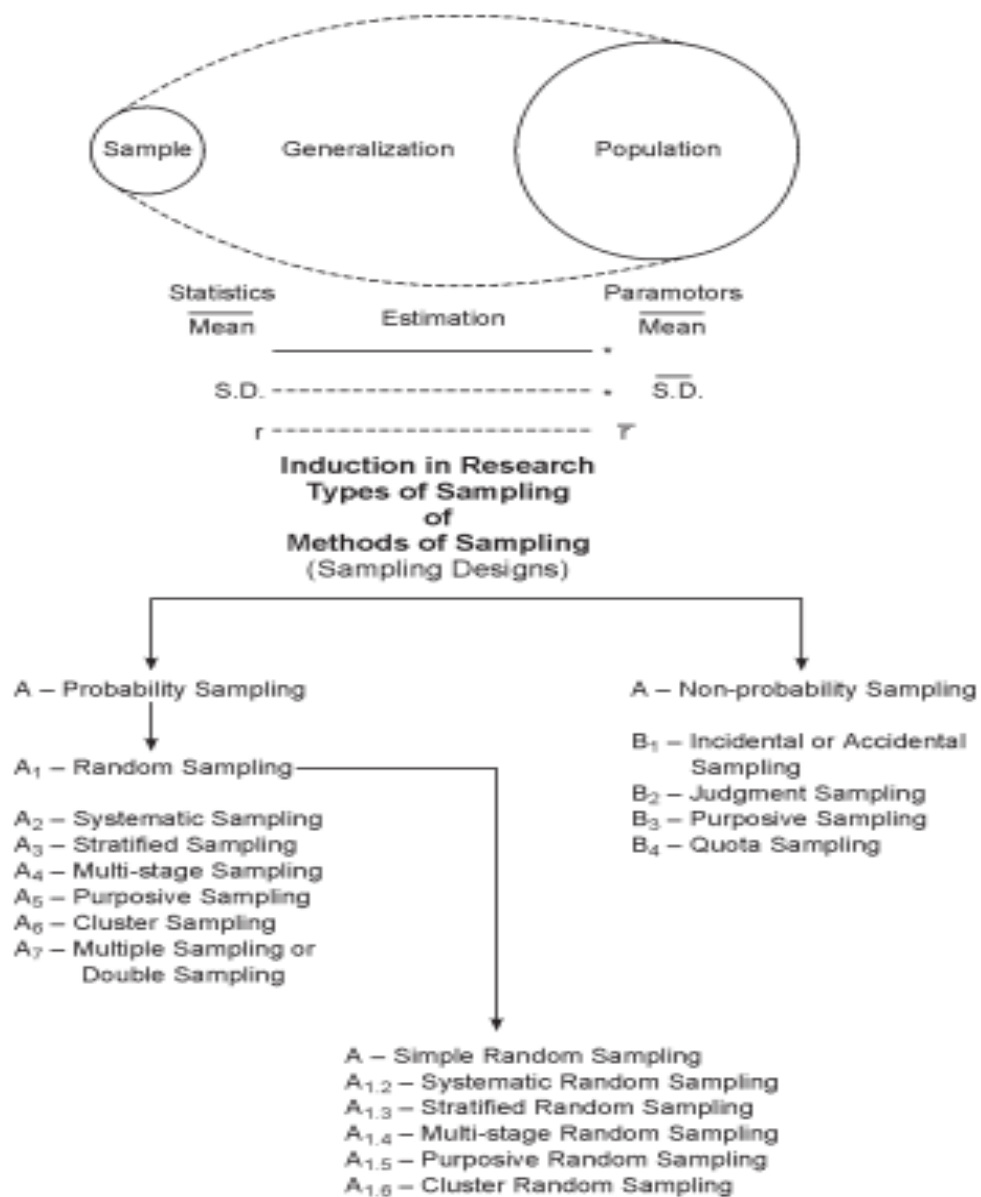
Figure 3.1: Types and Methods of Sampling (Adapted from Singh, 2006)

Singh (2006) divides the sampling process into two partitions: probability sampling and non-probability sampling. The former is a "Method of sampling which gives the probability that our sample is representative of population" (Singh, 2006, p. 85).

3.9.1 The Representativeness of the Sample

Singh (2006) states that the requirement for a representative sample stems from two issues: The first is that no researcher can evaluate an entire population because even the smallest population would take too long to recruit and test. Second, most researchers look for general conclusions and outcomes that apply to a population and not just a few individuals and this is what is required by a research. Thus, gathering suitable and representative informants is not a matter of getting people to participate; on the opposite, the researcher needs to choose the informants carefully.
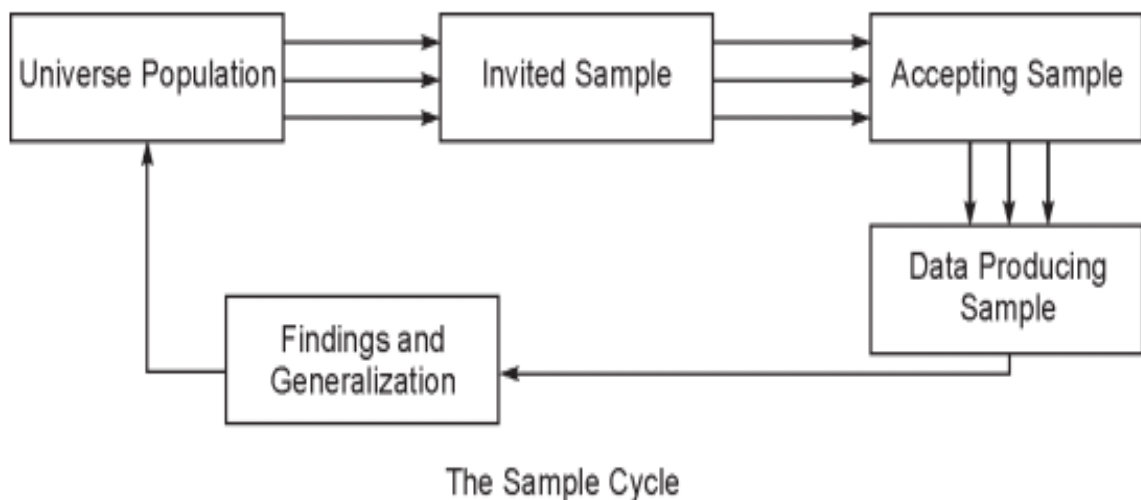
The Sample Cycle

Figure 3.2: The Sample Cycle (Singh, 2006, p. 95)

To sum up, there is no arbitrariness in selecting informants for data collection. As the process moves along, the researcher is risking the accuracy and validity of his data and outcomes; thus, the final results and objectives of the whole study.

3.9.2 Sampling in an ESP Situation

Similar to general English researches, ESP inquiries require a carefully selected sample for the study. Nevertheless, the density of needs analysis requires the researcher to depend on the variation of data sources in order to reach accuracy and validity in his/her results. Robinson (1991) supports this perspective stating that the potential (target) students, the institution where these students receive the language (Administrators), in addition to subject specialists, on which the researcher must rely to provide necessary information for the needs analysis study. Finally, she also states that former students who are probably   involved as professionals at the time of the inquiry might be of a useful source for the research.

The researcher collects the following feedback from the sample population for further analysis:

3.10 Participants' Profiles

In this section, the researcher refers to the participants profiles. This set of information will help him denote and then have a complete idea about the situation in general and the participants in particular. Eventually, it gives the research valid content and a more accurate direction towards meeting the study's objectives.

3.10.1 Data Collected through interviews

This part discusses data the researcher has collected through interviews. First, he debates ESP teacher profile as one of the most effective candidates within the whole process. Second, the researcher provides information about two aeronautics professionals on which this study focuses; a pilot and an air traffic controller.

3.10.1.1 ESP Teacher

Aures Aviation Academy has one ESP teacher who has been working at the school for nine years so far. According to the limited number of students stated by the school board (12 students), they believe it is sufficient to have one ESP teacher.

ESP teacher profile: She has worked in a number of institutions, private schools and administrations as an ESP instructor in the Ministry of Finance; she has a licence degree in applied linguistics (classical system). Up until 2016, she has more than seven years at Aures Aviation Academy and approximately eleven years of teaching English.

3.10.1.2 The Aeronautics' Professionals

By aeronautics professionals, the researcher refers to both pilots and air traffic controller. However, this expression is generalised to more staff like airhostesses, mechanics and engineers for instance.

The Pilot: The researcher chose specifically this pilot for his vast experience (31 years) in the field of aeronautics as a commander pilot for many years in national and international flights; also, as an advisor and instructor at Aures Aviation Academy.

The Air Traffic Controller: The ATC works at Batna Airport (6 years), he also worked for a short period at Houari Boumediene Airport- Algiers (18 months).

3.10.2 Data Collected Through Questionnaires

The following part is devoted to the discussing the data collected through our first data collection instrument which is the questionnaire.

3.10.2.1 Target Students

To be a part of Aures Aviation Academy's ATPL programme, students should have at least a BAC+ 2 i.e. the baccalaureate certificate in addition to two years at the university level. That was not the case a couple of years ago, where secondary school graduates could directly enrol for the ATPL programme. The new criteria required by the Aviation Academy stand as a great deal of help for our research, since students would be familiar with the idea of an ESP course or studying English for a specific purpose , taking into account that they took it at least for one year at the university

level (tertiary level). However, this is still not generalised for every single student as some of them might not had the chance to have an ESP course at the tertiary level.

Our sample represents a valid example of heterogeneity in matters of age, field of study, and linguistic background. Gender is not mentioned as we have just two female within the group. Kennedy and Bolitho (1984) state as an example of the positive side of heterogeneity that an older learner may be able to provide more information; more specifically, his ideas on why is he/she learning English might be more specific, thus more apparent English language learning effectiveness.

The researcher had to go through the academy's policy concerning students' enrolment in order to have an idea on the exact characteristics of the target sample population. The academy opens the enrolment session every nine (9) months, which is the period for the theoretical part of the training. The students have to go through different steps in order to be part of the academy's programme. After they fulfil the special medical check in Ain Naadja Military Hospital, in addition to the educational (degree) and financial requirements, students must go through an interview with the head of the pedagogical section at the academy.

The academy used to create programmes for twenty (20) students per session (9) months. After these students finish the nine months theoretical session and move to the practical part, the academy opens a new session for other twenty (20) students. However, the academy now accepts only 12 students for each session or group.

The researcher opted for all the theoretical part group (12 students) and two others were added by the academy later on. However, the researcher needed more participants for the validity and feasibility of the study, so he ended up with other six (6) students from the practical part group to make it an even twenty (20). On the other hand, and as all of the participants so far are novice pilots, the researcher needed novice air traffic controllers so that the sample complies with the research requirements and objectives.

Thus, the researcher had an additional five (5) students as novice ATCs from the military school of Reghaia-Algiers where they take their training. To sum up, the researcher has at his disposal a twenty five (25) students sample, with twenty (20)

novice pilots only two are females, and five (5) male novice ATCs. Students at Aures Aviation Academy are subject to questionnaire and they have been observed during the researcher's observational period (see 3.15.3).

3.10.2.2 Subject Specialists

Subject specialists are an important part of ESP course design process as they provide the researcher with more valid data and details especially if the researcher is not well aware of the field under investigation.

In addition to the captain (pilot) and the ATC, we have collected data from other specialists including instructors at Aures Aviation Academy who are also former pilots and ATCs (seven participants). It is worth mentioning that these professionals are former operational pilots and ATCs; now, they are theoretical programme instructors.

- ✓ Air Law/ Operational procedures/ Telecommunication instructor (a former ATC)
- ✓ General Knowledge/ "cellule system" instructor (a former pilot)
- ✓ Flying mechanics and aerodynamics instructor (military)
- ✓ General navigation/ Radio navigation instructor (a former ATC)
- ✓ Meteorology instructor
- ✓ Human factors instructor (a former pilot instructor)
- ✓ Cellular system / flight preparations and followings instructor (a former pilot)

Three flying instructors (the practical part of the students' training) were not included according to their unavailability during the data collection process.

3.10.2.3 Administrators

The following sample represents the four administrators working at Aures Aviation Academy. This will help the researcher to understand the aviation context and have more information on the learning context. As a result, it will help the

researcher to collect data that are more accurate to analyse, and to validate the outcomes of learners' learning needs.

- ✓ *The school's General Manager*: He has been working at the academy since its establishment; he is in charge of all of the institution's finances, staff, and recruitments.

- ✓ *The Training Administrator*: he is in charge of the preparation of programmes and conducting interviews with interested candidates. He has been with the Academy since 2001.

- ✓ *The Administrator of Installation/ Audits*: as stated is in charge of audits and bills in addition to official external communications and receiving officials.

- ✓ *The assistant/receptionist* is also a participant for the same reasons taking into account her knowledge of the aviation sector and her English language studies (licence degree).

3.11 The Disciplinary Perspective of the Investigation

Conducting a case study research necessitates choosing a design that goes hand in hand with the disciplinary perspective of the investigation. According to (Hancock and Algozzine, 2006; Miles and Huberman, 1994; Yin, 2003) Case studies may take many perspectives; researchers use ethnographic designs for targeted interactions of a specific group.

Historical designs concentrate more on social events and programmes with their chronological change. Researchers use sociological designs in order to tackle major issues in society, social institutions, and social relationships. Psychological designs study the human behaviour in details; intrinsic designs focus on particular event, situation, or activity; an instrumental design studies for the better understanding of a theory or an issue; and finally, a collective design opts to recognize a viewpoint by the combination of data from smaller cases.

Our case study is a link and a combination between two disciplinary perspectives: the sociological and ethnographic design as it investigates a major issue

in society (air traffic accidents) caused by break down of communication and misunderstanding. Furthermore, from the ethnographic perspective, it deals with a specific interaction that occurs within a specific group of individuals (pilots and ATCs) who share the same responsibilities and linguistic requirements.

3.12 Case Study Research

In order to achieve desired research objectives, the researcher goes through a group of organized phases. The chosen method is relatively an important phase within scientific research. Its appropriateness can guarantee the accuracy of results, significance of the study, and fulfilment of objectives.

Case study research refers to an experimental investigation of up to date phenomenon. This study is conducted using multiple sources and within its natural context (Yin, 2003). Also, worth mentioning that most scholars and researchers prefer using the term case study as a catchall type of research that is not a survey, an observational study, or an experimental and is not statistical in nature (Merriam, 2001). Therefore, the researcher is not bounded with the use of only one research instrument or a single analytical method.

Nunan (1992) presents nine modals of scientific research in applied linguistics that are classroom observation, experimental, descriptive, ethnography, case study, elicitation, introspective, programme evaluation, and interaction analysis. Each single model differs in matters of characteristics, desired outcomes, purpose, and foci.

The researcher with thoroughness chooses these models. This choice relies on many criteria worth mentioning the literature and the characteristics of the modal in data collection availability. Research Thoroughness within its methodology is what a researcher seeks in the application of these models, since the base of the methodological rigor is the selection of the appropriate model that gives valid outcomes.

The data the researcher has discussed about the scientific research modals, the field we are dealing with and the population, we are interested in the case study model for the following motives.

Case study refers to "an event, an entity, an individual or even a unit of analysis, it is an empirical inquiry that investigates a contemporary phenomenon within its real life context using multiple sources of evidence" (Yin, 1993, p. 11). From another perspective, Anderson (1993) defines it as an inquiry of the manner and the reason things occur, allocating the investigation of contextual actualities to show the difference between the planned and the actual occurrence. To sum up, case study allows the researcher to probe complex phenomena or activities using multiple research instruments in collecting and analysing data.

Key point: the case study strategy

The decision to use a case study approach is a strategic decision that relates to the scale and scope of an investigation, and it does not, at least in principle, dictate which method or methods must be used. Indeed, a strength of the case study approach is that it allows for the use of a variety of methods depending on the circumstances and the specific needs of the situation.

Case study research characteristically emphasizes

Depth of study	rather than	Breadth of study
The particular	rather than	The general
Relationships/processes	rather than	Outcomes and end-products
Holistic view	rather than	Isolated factors
Natural settings	rather than	Artificial situations
Multiple sources	rather than	One research method

Figure 3.3: A Good Research Guide (Denscombe, 2007: p38)

This process helps reaching accurate outcomes according to the large amount of data gathered and analysis methods; thus the name -the catchall design-.

3.12.1 Types of Case Study Research Design

The research designed to follow the case study model has three types: exploratory, explanatory, and descriptive (Yin, 2003).

- *Exploratory research:* Hancock and Algozzine (2006) as a prelude to further effort and fieldwork describe exploratory research design as it defines the research questions of a following study and determines the feasibility of research procedures.

- *Explanatory research*: "Explanatory designs seek to establish cause-and-effect relationships" (*ibid*). In other words, the purpose of this design is to find out how events occur in particular situations and the ones that may have a direct or indirect influence on particular results.

- *Descriptive research*: a descriptive design as it is a self-explanatory concept; it describes thoroughly a selected phenomenon in its context. In our case, we chose to create a combination of the three as our research illustrates, analyses, and then interprets the outcomes.

- *Three additional types*: According to (Duff, 2008; Miles and Huberman, 1994; Yin, 2003) three additional types added to the former; relational design which draws a relation between different variables; the evaluative design (ex: which learner, interlocutor, or programme is more effective), and the confirmatory design that comes to confirm existing findings or perspectives.

Accordingly and first, our study explores the English language used within the field of aeronautics and the occurrence of formulaic sequences in their communications. Second, our investigation opts for finding the communicative failures as causes of incidents/ accidents and if formulaic language is a part of this deficiency in the aeronautics professionals' English language. This goes hand in hand with the needs analysis of the target population that includes a group of aeronautics students (twenty novice pilots from the private school of pilots training "Aures

Aviation Academy" and five ATC students from the department of aeronautics at Blida University).

Finally, the design of an English language course takes place for the fulfilment of the students' needs and requirements. In addition, our study aims at creating a relation between the two variables: formulaic language and communicative competence (relational design).

3.12.2 Characteristics of Case Study Research Design

In addition to the multiplicity of case study research types, methods used in each type, research tools and analysis methods used in this research design, scholars ensure this diversity also in its characteristics.

According to Merriam (1988), the following are the main characteristics of the case study research design:

✓ They involve the intensive study of an individual, family, group, institution, or other level that can be conceived of as a single unit.

✓ The information is highly detailed, comprehensive, and typically reported in a narrative form as opposed to the quantified scores on a dependent measure.

✓ They attempt to convey the nuances of the case, including specific contexts, extraneous influences, and special idiosyncratic details.

✓ The information they examine may be retrospective or archival.

From another perspective, Hamzaoui (2010) portrays characteristics of case study research in the following table.

Modal	Purposes	Foci	Key Terms	Characteristics
Case Study	-To portray, analyse and interpret the uniqueness of individuals and situations through accessible accounts - To catch the complexity and situated sense of behaviour - To contribute to action intervention -To present and represent reality –To give a sense of 'being there'	-Individuals and local situations –Unique instances -A single case -Bounded phenomena and systems: *individual *group *roles *organizations *community	-Individuality, uniqueness -in-depth analysis and portrayal -interpretive and inferential analysis -Subjective -Descriptive -Analytical -understanding - specific situations -sincerity -complexity -Particularity	-in-depth, detailed data from wide range source. - participant and non -participant observation -non- interventionist -Empathic -Holistic treatment of phenomena -What can be learned from the particular case

Table 3.2: Elements of Research Styles (Hamzaoui, 2010, cited in Lamri, 2011, p. 58)

The diversity shown within the characteristics of case study makes us aware of the reason researchers and scholars define it differently as well. In addition, this approach is not limited to a unique principle or a certain feature.

3.12.3 Features of Case Study

As mentioned earlier, and as far as the process of case study research is concerned, numerous features characterizing the case study differ from one researcher to another according to his perspectives and practices (Allouch, 2012).

Hitchcock and Hughes (1995, p. 317) regard the following as features of case study research design:

- It is concerned with a rich and vivid description of events relevant to the case.

- It provides a chronological narrative of events relevant to the case.

- It blends a description of events with the analysis of them.

- It focuses on individual actors or groups of actors, and seeks to understand their perceptions of events.

- It highlights specific events that are relevant to the case.

- The researcher is integrally involved in the case.

- An attempt to portray the richness of the case in writing up the report.

Case study research gives the chance to the researcher to discover and discuss the phenomenon under study from different perspectives and provide the reader with a large amount of information and vivid description of the subject and what is related to it.

3.12.4 Steps of Case Study Application

On the same breath, it is inevitable to state that researchers differ in the application of the case study research based on the features mentioned above; nevertheless, they practically have similar steps to follow while conducting a case study research. The following list including the six steps of conducting a case study. It summarises the work of Stake, Simmons, and Yin, and listed by Soy and Susan K (1997):

- Determine and define the research questions
- Select the cases and determine data gathering and analysis techniques
- Prepare to collect the data
- Collect data in the field
- Evaluate and analyse the data
- Prepare the report

Next, Duff (2008) uses the following diagram in order to stand as a visual display of the components, steps and interactions of the general case study research design.

Ethical considerations
- Preparing IRB review protocols
- Negotiating access, permissions, informed consent, reciprocity, procedures
- Reporting

Research "problem" and Design
- Research objectives
- Conceptual or theoretical Framework
- Research questions
- Identifying context(s), case(s), units of analysis, sampling strategy, timeframe, etc.

Data collection
- Observing
- Interviewing
- Triangulating
- Collecting artifacts, etc.
- Keeping research journal/log

Data analysis
- Transcribing
- Sorting/organizing/ Managing database
- Creating conceptual maps
- Memoing
- Coding
- Comparing cases
- Reducing data/narrowing analysis
- Triangulating
- Pattern-matching
- Inducing themes
- Finding counterexamples (etc.)

Interpretation
- Identifying and Understanding key themes or patterns
- Considering rival explanations or data
- Drawing conclusions

Writing, reporting, and revising
- Determining Audience, genre
- Selecting representative evidence
- Displaying data
- Creating coherent, complete narrative or expository report
- Producing final report(s)

Understanding and generating theory
- Becoming familiar with relevant theoretical issues
- Situating case(s)/findings within existing research literature
- Finding/filling gaps in the literature
- Arriving at new insights based on data analysis/interpretation
- Relating findings to existing literature
- Identifying remaining or new issues to be explored in future

Verification/validation of interpretations
- Presenting (preliminary) observations/findings to participants/cases or other stakeholders (member-checking) if appropriate
- Getting feedback from others
- Seeking additional data or re-examining existing data, as needed

Diagram 3.1: How to Conduct a Case Study: Crucial Components, Steps, and Interactions (Duff, 2008, p. 100)

Duff (2008) uses the above diagram as a process of the case study design; however, it may differ according to many factors like the research variables and the researches' objectives. We have planned our research to follow Duff's instructions.

3.13 Triangulation

Robson (2007) states that the triangulation approach is the employment of more than viewpoint, theory, participant, method or analysis; moreover, the purpose is that this helps obtaining a better "fix" on the research object.

After we have determined the questionnaire and interviews for students, instructors, and professionals, the researcher decides to add classroom observation as it "helps to reduce the uncertain of interpretation and confirm the findings by triangulate my research methods" (Sham, 2009: 12). In addition, it helps getting information from different sources since each tool has a specific subject (Questionnaire – students/ subject specialists, interview – aviation professionals and the English language teacher, classroom observation – observer and students).

Triangulation assures the rigor of the research; Denzin (1988) has distinguished these following four types of triangulation:

- Data triangulation: the use of more than one method of data collection (e.g. observation, interviews, documents);
- Observer triangulation: using more than one observer in the study;
- Methodological triangulation: combining quantitative and qualitative approaches;
- Theory triangulation: using multiple theories or perspectives.

Padgett (1998) describes many strategies used is scientific research for dealing with threats to validity. Triangulation as a strategy guarantee the investigation's validity as we may notice in the developed table below.

Strategy	Threat to validity reactivity	Researcher bias	Respondent bias
Prolonged involvement	Reduces threat	Increases threat	Reduces threat
Triangulation	Reduces threat	Reduces threat	Reduces threat
Peer debriefing/ support	No effect	Reduces threat	No effect
Member checking	Reduces threat	Reduces threat	Reduces threat
Negative case analysis	No effect	Reduces threat	No effect
Audit trail	No effect	Reduces threat	No effect

Table 3.3: Strategies for Dealing with Threats to Validity (Padgett, 1998, p. 95)

To sum up, any researcher needs to take advantage of any means available to enhance the feasibility and validity of his/her research and outcomes, triangulation is a fine example. "Triangulation is not so much a tactic as a way of life. If you self-consciously set out to collect and double check findings, using multiple sources and modes of evidence, the verification process will largely be built into data collection as you go" (Miles and Huberman, 1994, cited in Robson, 2007, p. 483). Thus, triangulation provides the necessary assistance for the researcher and sets him/her on the right track for a concise research plan and outcomes.

3.14 Data Collection Instruments

The case study as a research approach gives the chance to the researcher to use multiple methods to collect/analyse data, and to diversify the study sources. Denscombe (2007) adds that it is case study approach strength to allow the investigator to use a variety of sources, data, and research methods; in addition to

whatever is suitable to investigate the connections and processes of the study's interest. For our research interest, Creswell (2014) adds that the researcher focuses the inquiry on assuming that collecting several types of data provides a more comprehensive understanding of a research problem than either one of them alone(quantitative or qualitative data alone only).

The researcher relies on the most frequent research tools to collect sufficient and accurate data. "The most frequently used methods are questionnaires; interviews; observation and informal consultations with sponsors, learners and others". (Benyelles, 2009, cited in Lamri, 2011, p. 64). The following list presents a detailed description of the sources used for the study:

- Books, articles, internet sites and E-Books are used by the researcher for literature in the field of ELT, TEFL, ESP, Pragmatics, Applied linguistics, and research methodology.
- The researcher used different theses from ELT and ESP fields for data on former studies and research findings.
- The researcher attended courses provided by professors at the English department- Tlemcen University, and different seminars and trainings in addition to individual or private meetings in order to collect more data on ESP course design, research methodology, and aviation English.
- The researcher uses questionnaires with target students, aeronautics experts, work place managers-administrators and subject specialists to collect data for analysis. The outcomes will be taken into account for the further stages of ESP course design procedure.
- The researcher uses semi structured interviews with two aeronautics professionals and ESP teacher to gather data to be analysed for course design procedures.
- Specialty references such as books, videos, recordings, guides and manuals provide the researcher with data on the field under investigation in order to report accurate data and have a broader image on the aeronautics field as a research interest.

-   Additionally, the researcher took a specialty training provided by the EALTS officials to be certified as an English language assessor for aeronautics students and operational professionals. This, as a specialty practice, would help him gain extra knowledge especially for learners' assessment in ESP.

The researcher widened the selection for data sources within the theoretical part to guarantee the diversity of the study and to elaborate the notions tackled especially the ones related to aeronautics and the processes followed around the world, as far as English is concerned. Furthermore, we have chosen the use of this considerable number of data collection tools described next, to ensure both the quantity and quality of the gathered information in addition to our insufficient data on aviation, even if the process is neither simply applied nor processed.

3.15 Research Instruments Applied

Scientific researchers have many tools of investigation in their disposition. The researcher employs these tools in distinctive ways of describing and qualifying the data. Singh (2006) elaborates this distinctiveness, as "each tool is particularly appropriate for certain sources of data yielding information of the kind and in the form that would be most effectively used" (p. 191).

In our study, the researcher designs different research instruments questionnaires, interviews, and a classroom observation grid to guarantee the validity of the collected data.

3.15.1 Questionnaires

The first research instrument is the questionnaire. The researcher designs it for students of aviation (aeronautics), both novice pilots and air traffic controllers, As well as for subject specialists like instructors, administrators, and training designers. Investigators usually use this research instrument for the main reason stated by Richards (2005):

> Questionnaires are one of the most common instruments used.
> They are relatively easy to prepare, they can be used with large
> numbers of subjects, and they obtain information that is
> relatively easy to tabulate and analyze. (P. 60)

Also, and in terms of the frequency of using this data gathering method Singh (2006) states that "The questionnaire is probably the most used and most abused of the data gathering devices". (P. 191)

Many scholars and researchers attempted to give suitable definitions for questionnaires as data gathering tools. Thus, here we provide two definitions: Richterich and Chancerel (1980, p. 59) states, "questionnaires are structured instruments for the collection of data which translate research hypotheses into questions". In other words, Brown (2001) provides a simple definition of this research instrument when he states that a questionnaire is:

> Any written instrument that present respondents with a series
> of questions or statements to which they are to react either by
> writing out their answers or selecting from among existing
> answers. (P. 6)

Furthermore, investigators use questionnaires for their simplicity, flexibility, and as a time saving tool. Perry (2011) confirms this by stating that questionnaires have two major advantages over interviews as data gathering tools. The first one he focused on is concerned with the time allotted to this process as it is the "times saving method" in terms of collection or analysis. As well, researchers use questionnaires for larger numbers of participants. Secondly, he characterised this method as an economical way of gathering information in terms of time, money, and energy.

The researcher designed questionnaire for this specific large sample population because it "can be used with large number of subjects, and it obtains information that is relatively easy to tabulate and analyse" (Richards 2001, p. 60). Besides, a questionnaire is "a form which is prepared and distributed for the purpose

of securing responses. Generally these questions are factual and designed for securing information about certain conditions or practices, of which recipient is presumed to have knowledge" (Singh, 2006, p. 191).

The reliability of questionnaires lies on validity of the collected data as stated by Singh (2006, p. 194) "In questionnaire forms are used and the respondents fill in themselves, thus questionnaire place heavy reliance on the validity of the verbal reports". Singh also points out that the unique advantage of questionnaire that makes it highly used by investigators is its flexibility and easy usage in addition to the collection of both quantitative and qualitative data.

- **Additional Motive for Using Questionnaires**

As the above information on "why using questionnaires" we provided show, Denscombe (2007) adds two types of data collected by questionnaires, facts and opinions. He states that "it is vital that at all stages of using questionnaires the researcher is clear about whether the information being sought is to do with facts or to do with opinions" (p. 155). The two types of outcomes he presents are as follows:

> ✓ Factual information: respondents are supposed to reveal undemanding information without any judgments or personal perspectives like age, sex, or marital status.
> ✓ Opinions alongside beliefs, attitudes, views, and preferences are the types of feedback in which personal perspective and judgment are highly required rather than mere facts.

In this research work, we designed our questions to get both types of data quantitative and qualitative. As an example, the question (B-1) is designed to get factual information on students' English language studies and background (see appendix 1).

In order to present an accurate research instrument, we have designed a set of questions following Hutchinson and Waters (1987) framework of needs analysis

(target needs and learning needs).These questions refer mainly to the target situation, the participants, and the attitude towards the situation as recommended by Hutchinson and Waters (1987).

In our research, we have prepared two questionnaires for data collection, analysis, and finally answering the research questions and testing our hypotheses. The first one is assigned for students, twenty-five of them are provided with a questionnaire in English. Twenty students are novice pilots and the other five are novice air traffic controllers. The second questionnaire inquires seven subject specialists who are instructors at Aures Aviation Academy and are former aviation professionals (pilots/ ATCs); additionally, we included four administrators for the reason of providing us with more data on the learning needs.

3.15.1.1 Types of Questions Used in the Questionnaire

Within our research questionnaire, we used three types of questions: close ended, open ended, and mixed questions that include a close-ended question with a further extension of an open-ended question. Mostly for more information or to provide us with a reason for the chosen answer.

- *Close-ended questions (closed-form):* are limited in terms of answering them as the investigator provides a specific set of answers so the respondents would just choose the answer that best suits their judgment. Perry (2011) provides a plain explanation:

> Closed-form items provide a set of alternative answers to each item from which the respondent must select at least one. For example, a question might require a participant to choose either yes or no, agree or disagree. A statement might be given requiring participants to indicate their level of agreement on a five-point scale. This scale is often referred to as a Likert scale.(P. 123)

As an example from our designed questionnaire:

- Are you aware of the requirement instituted by the ICAO that states that the English language is the International language of aviation? (See appendix 01).

Yes   ☐

No   ☐

- ***Open-ended questions (open-form):*** this type of questions does not confine the respondent into giving a specific answer, it gives him/her the freedom to choose the preferred response in his/her own words. Perry (2011, p. 123) confirms the idea of open-form questions being "items allow participants to give their own answers without restrictions. This type works best when there could be a wide variety of answers that participants might give to a question".

As an example from our research questionnaire:

- What do you want to learn exactly in the English language? (appendix 01)

- ***Mixed questions:*** they are a mixture of both open and closed form of questions. They start with a question with provided choices then the researcher asks for a clarification, justification, or a reason. Example: (see appendix 02)

- Is the course they have in this institution enough?

Yes ☐   No ☐

Justify…………………………………………....

- Should all teachers use English in their sessions or course of instructions?

Yes ☐   No ☐

Why? ……………………………………………………………….

3.15.1.2 Questionnaire Sequencing - Rubrics

In this section, the researcher describes the division of designed questionnaires into rubrics. Both target students, and subject specialists questionnaires were divided into rubrics as it helps both the researcher develop an organized process on which the reader will not find any difficulties acquiring the data presented.

- **Description of Students' Questionnaire**

The researcher divided the questions into **rubrics** according to the nature of the question. On one hand, this will allow him an easier and more organized analysis; and on the other, students would not feel disturbed by the "jumping around" from one topic to another and be frustrated, as this would definitely affect their answers' quality. Dornyei (2010) based on Newell (1993) elaborates:

> The most important aspect of sequencing questions is to ensure that the respondents' overall impression is that the structure is well organized and orderly. Overall impression is that the structure is well organized and orderly. If the ordering of questions is unpredictable or seemingly haphazard, it will frustrate respondents and make the study appear ill-considered and amateurish. (P. 47)

Within the students' questionnaire, we have divided it into four rubrics. The first deals mainly with general questions on informant's age, gender, and English language level. Furthermore, it includes two questions on students' attitude towards the target language and its significance to their studies.

The second rubric aims to obtain information on students' attitude and motivation towards ESP course and learning English. Additionally, the informants' perspective on the course content in relation to their interest.

The third part explores students' difficulties in learning English alongside the issues they face in using the target language. On the same section, the investigator explores their lacks and which language skill they would prefer to master most in relation to their future jobs' requirements and technical language, i.e. the use of phraseology and communication through radiotelephony.

Finally, the fourth rubric contains questions that aim to elicit students' wants and necessities concerning English language. The investigator aims to obtain information on respondents' objectives of learning English and if the time allocated to ESP session at AAA (Aures Aviation Academy) is sufficient for them. Lastly, students would have the opportunity to provide suggestions they think will enhance the quality of their instruction process.

- **Description of Subject Specialists Questionnaire**

Similar to students' questionnaire, the one we designed for subject specialists both instructors and administrators include the three types of questions: close-ended, open-ended, and mixed questions. Through this inspection, we aim to uncover specialists' perspective on the English language in the aeronautics field of study, research and work. In addition, it seeks to understand their language background, use, and hurdles they face while using it in different settings and for different purposes. The researcher asks the informants to share their opinion on ESP session and the time allocated as far as students' language needs are concerned. Finally, using ESP in specialty subjects and official paperwork for administrators has its own share in this questionnaire.

As mentioned earlier, sequencing the questionnaire provides and easier analysis process for the investigator and does not jeopardize the students' answers quality. The first rubric of the subject specialists' questionnaire inquires informants' general information. As an example: Age, gender, institution status and qualifications (degree).

The second sequence is concerned with respondents' English language background and use, taking into consideration the use of language in their

professional life, impediments they face, and their standpoint on the language and its relation to aviation.

In the third rubric, the researcher seeks to value the importance of the English language in aviation according to our respondents. Furthermore, this section examines our specialists' viewpoint on using English in their specialty modules.

Researchers tend to use more than one data collection method for guaranteeing the validity, feasibility and accuracy of data collected. In addition to questionnaires, the researcher used interviews with ESP teacher and aeronautics professionals (Pilot and ATC), and are both elaborated next.

3.15.2 The Interview

The interview is a useful research instrument in educational research. It helps the researcher to obtain more in-depth statements related to the subject studied. In other words, investigators rely on this research tool to acquire information that might be far from their reach and are reachable using this tool, especially by subject specialists, as in our case with pilots and air traffic controllers. Duff (2008, p. 134) clarifies "Interviews are one of the richest sources of data in a case study and usually the most important type of data to be collected. Interviews provide the researcher with information from a variety of perspectives." Duff simplifies the point we want to get to, interviews present the most helpful data-gathering tool for researchers tackling new subjects in relation to education generally.

In relation to case study research, the use of the interview comes to benefit from the face-to-face interaction (preferably) that provides more than words; i.e. facial expressions, actions, reactions, and generally the human behaviour that can provide the interviewer with more information and gives him/her the chance to ask more accurate questions as stated next:

> … Interviews are an essential source of case study evidence
> because most case studies are about human affairs. These human
> affairs should be reported and interpreted through the eyes of

specific interviewees, and well-informed respondents can
provide important insights into a situation. (Yin, 1994, p. 20)

Annum (2015) also points out the benefit of interviews especially when conducted face-to-face as we stated earlier (preferably), and the effect of the procedure on the quality and accuracy of the gathered data as he declares:

Interviews become necessary when researchers feel the need to meet face-to-face with individuals to interact and generate ideas in a discourse that borders on mutual interest ... specifically with research interviews, the researcher has to identify a potential source of information, and structure the interaction in a manner that will bring out relevant information from his respondent. (P. 1)

Depending on the objectives and the data that researchers seek to obtain, the research approaches drawn by scholars and applied linguists provide a wide repertoire of types of interview for usage accordingly. For example, Le Compte and Preissle (1993) offer: standardized interviews; in-depth interviews; ethnographic interviews; elite interviews; life history interviews; and focus groups interviews. However, Bogdan and Biklen (1992) argue the existence of semi-structured interviews; and group interviews. While Lincoln and Guba (1985) include structured interviews. Patton (1980: 206) suggests four categories: informal conversational interviews; interview guide approaches; standardized open-ended interviews; and closed quantitative interviews (Allouch, 2012).

In this study, the researcher takes advantage of the "boundless" nature of semi-structured interviews, which is also characterised by flexibility and freedom of the interaction. To discover the world of aviation English (as courses, technicality, teaching, personal/professional use) through asking questions, and using others based on our experienced respondents' answers (operational professionals-pilot/ATC), to feature the information for the readers and before that, for the researcher himself. Annum (2015, p. 2) adds, "The interviewer freely modifies the sequences of the

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questions, changes the wording, and sometimes explains them or adds to them during the interaction".

To reinforce the quantity and quality of the data gathered, Creswell (2014) believes that the interview allows the researcher to gain views that are more detailed from respondents to elaborate the initial quantitative survey, exactly as in our case. Thus, we intend to use this research instrument accordingly. The same objective stands behind the use of interviews for ESP teacher. More accurately, to provide further data on the learning environment and the courses' content.

3.15.2.1 ESP Teacher Interview

ESP teacher interview seeks to investigate her ESP course in general. Specifically, in terms of the teaching environment, teaching approach, methods, and techniques in addition to her viewpoint on the linguistic requirements stated by the ICAO without neglecting our main interest, which is formulaic language and its effect on developing learners communicative competence. The semi-structured interview is sequenced as follows:

Sequence one: Informative questions;

Sequence two: ESP course at Aures Aviation Academy;

Sequence three: Detailed information on ESP course;

Sequence four: Aviation English;

Sequence five: Students' lacks, necessities, and wants;

Sequence six: Formulaic language, ESP, and Aviation;

Sequence seven: Suggestions and recommendations.

The researcher makes sure of giving the chance to our respondent to elaborate and provide any related additions taking into account her experience in the field of aviation English.

3.15.2.2 Aviation Professionals' Interview

On the other hand, the aviation professionals' interview consists of 12 questions; they address our specialists' educational and professional background in relation to the English language (see appendix 03).

Question 1 and 2: are informative questions about our specialists' educational background.

Questions 3 to 6: these elements question our professionals' perspective on aviation English and their personal use of the language (personal and professional).

Questions 7: the question looks into the professionals' use of English with native speakers. In addition, communication obstacles faced that are in direct relation to language while on duty.

Question 8 to 10: these questions seek to discuss aviation English, phraseology, and formulaic language in plain English needed in aviation.

Question 11: this question aims at knowing if our professionals' have had any kind of incidents or accidents related to misunderstanding or breakdown of communication, and how they have dealt with it.

Question 12: the last question invites our specialists to share their experience through suggestions and recommendations.

At this stage of our research, we have come to the design of our interview for the English language teacher and for the two aviation professionals: a pilot (international flights) and an air traffic controller. We use this research tool since it is "feasible for smaller groups and allows more consistency across responses to be obtained" (Richards 2001, p. 61). In addition, the Interview of an individual or a group gives the chance to the researcher to achieve rich, personalized data (Mason, 2002).

The researcher chose a semi-structured interview according to its feasibility for our data needs, as it helps the investigator/ interviewer rearrange his inquiries and the informant to not feel restricted to a set of questions and develop more ideas to provide details needed by the researcher.

3.15.3 Classroom Observation

Observations are the most frequently used research instruments in case study investigations (Hancock and Algozzine, 2006). More accurately, and unlike interviews which may carry biased views and insights of events, observations of the teaching/ learning context by the researcher himself provides more accurate and objective data for the study, "observation can yield information which people are normally unwilling or unable to provide" (Anonymous). Thus, triangulation within research data-collection instruments is mostly more beneficial when including observation whenever suitable; considering our case. Yin (1994) claims that:

> Observations are another important source of information
> in case studies. This is especially true in case studies
> involving classrooms or schools, because the interaction of
> individuals cannot be understood without observation.
> (P.22)

Researchers rely on this data collection method as it provides truthful information that comes directly from their naturalistic setting. As Denscombe (2007) describes the nature of observational research to be a distinct and direct tool of collecting data, also it is best to witness what actually happens since the researcher witnesses events first hand.

Based on the former perspective, and where interaction occurs (a classroom in our case), the naturalness of the setting and the pureness of "first hand" data the investigator collects from observing, can help him generate accurate information and results on the classroom participants' interaction TTT/STT (Teacher Talking Time/ Students Talking Time).In addition to that, it helps indicate students' motivation and attitudes towards the session and the English language in their field particularly. Van Lier (1988) promotes this perspective by stating that:

> Many case studies in applied linguistics include the systematic, focused observation of case participants in their natural contexts (classrooms, homes, community centres, workplaces), especially if one of the objectives of the study is to examine people's linguistic performance or interaction in naturally occurring social situations. (Van Lier, 1988, cited in Duff, 2008, p. 138)

The classroom environment is one of the main aspects affecting the teaching/learning process and outcomes. Wajnryb (2010) indicates, "Few would now doubt that people learn best when they are relaxed, comfortable, unstressed, interested and involved in what is going on, and motivated to continue" (p.58). Thus, being aware of the factors affecting the learning progression and positive influences can be helpful to learners. Nevertheless, there is no single chart of these factors on which theorists and scholars agreed, in order to ensure a successful teaching-learning process. He adds "... Regrettably, there is no hard-and-fast, definitive list of what makes an environment conducive to learning, we cannot, for example, say that 'the more a teacher smiles, the more relaxed the students are' as this is absurdly simplistic" (p.58).

Generally speaking, there are two kinds of observation, the systematic and the participant observation. According to Denscombe (2007), the former has origins in social psychology particularly in studying the interaction in settings such as school classrooms, and it produces quantitative data with the use of statistical analysis. The latter is mainly associated with sociology and anthropology and investigators use it as an undercover operation to permeate situations to understand cultural processes of groups under investigation. It usually generates qualitative data.

For researchers, the two forms of observation maybe dissimilar regarding their origins and their use within research. Nevertheless, Denscombe adds that they share some fundamental characteristics as far as the research process is concerned:

- Unlike questionnaires and interviews which base their data on what informants provide for the researcher, and documents where the investigator is not a part of the action, these two types of observation rely on *direct observation*.

- The researcher does not lean on secondary sources, S/he goes and seeks first hand data directly from the field (*devotion to fieldwork*)

- *Naturalness of the setting* stands as an important factor in guaranteeing a pure set of information unlike artificially created conditions such as laboratory experiments that can include features altering the situation under treatment.

- *The issue of perception* is seen by both systematic and participant observation as an issue that needs to be tackled, i.e. the researcher's perception of the situation under observation/study, might be influenced by personal perspectives of the investigator that leads the data collected to be unreliable.

As far as the research setting is concerned, Denscombe (2007) and based on the work of (Croll, 1986. Flanders, 1970 and Simon and Boyer, 1970) states that systematic observations is usually used in schools' classrooms as our research methodology requires. Therein comes the definition of Mackey and Gass (2005) who provided a label for this kind of observation that counts on the first characteristic mentioned above, calling it naturalistic or direct observation. These two labels occur interchangeably by researchers' studies and they define them by the following principles:

- Naturalistic observation obliges the researcher to stay away from the observed event to not disrupt any of the occurrences therefore getting reliable data (non-interference).

- Naturalistic observation is a process that is used to survey phenomena existing in the real world.

- This observation approach is more beneficial for researchers who know little or nothing of a certain behaviours or phenomena under study.

- This method is mainly descriptive, it can provide us with the description of a specific event but not why it occurred.

There is a consensus as theorists such as Wajnryb (2010) and Denscombe (2007), emphasise on the principle of non-interference by providing a distinction between two kinds of naturalistic observation:

> ➢ Participant observation: rather than being just an investigator, the researcher plays an additional role by being a part of the observational process, as to be the teacher or one of the learners in a teaching-learning context. Thus, the observer is an active participant in the observation procedure.

> ➢ Non-participant observation: here, the researcher does not play any active role within the teaching-learning process as an example. Accordingly, s/he does not interfere in the procedure and just observes the course of events.

The theoretical part of classroom observation is as challenging as its practical part. On this following part, the researcher describes systematically the observation procedure he conducted.

3.15.3.1 The Observation Procedure

Aures Aviation Academy is known for its strict rules and organized work. The investigator explained the procedure for ESP teacher to avoid any kind of disruption, as she has to consult everything with supervisors/administrators in the academy. This is an important step towards an organized conducting of an observational procedure.

Among the information provided: the observation process duration, finding a common ground on the time the researcher can conduct the observation, the objectives of the process, in addition to the aspects of language and practices the investigator seeks to focus on during the observation procedure. Nevertheless, the researcher did not state all the details for ESP teacher to avoid any kind of distortion over her courses' content also to preserve the naturalness of the setting and the information gathered later. Finally, he elaborated that there would be no judgment over the course content or teaching method, as this constructive study aims at improving ESP course's outcomes.

3.15.3.2 Description of the Classroom

In this part, the researcher is going to provide more information on the setting of ESP session. The classroom includes fourteen students, twelve males and two females. During these last two years, Aures Aviation Academy accepts just twelve students every eighteen months of ATPL training (Airline Transport Pilot licence) (see 3.6). The courses take place within the academy building/ pedagogic section that includes classroom in addition to the other part where we found the only simulator in Algeria.

Students have every day sessions (Sunday-Thursday) from 18:00 to 20:00 for all their theoretical part of the training (nine months). The teacher has long years of experience in teaching in general. After she got her licence degree, she worked in many private schools and administrations including the ministry of trade. She has been with the Academy for seven years.

3.15.3.3 Field Work Procedure and Duration for the Observation Process

ESP teacher was welcoming and invited us to attend sessions at any time we require. However, the researcher faced few problems with the timing of the sessions, as the teacher was not available at all times. The researcher conducts the observation process by sitting at the back of the classroom and taking notes- even if ESP teacher invited him to use the her desk- he preferred to avoid any sort of disturbance for both students and the teacher for the sake of not jeopardizing the naturalness of the setting and course of events. The three sessions we attended in addition to a makeup session were between February and November 2015 because of the researcher's need for checking different tackled topics and learner's progress, attitudes, and motivation.

3.15.3.4 The Observation Grid and Types of Collected Data

In our research, we prepared an observation grid, which the researcher has modified in terms of content, design, and methodology after the first and the second

observational session, it includes the most important information needed to fulfil the investigation's objectives and answer the research questions as it shows next.

<div style="border:1px solid">

The Observation Grid

The Classroom
- The teaching/learning context.

The Course
- The teacher and learners' attitude towards the session (language);
- Students' motivation (arousing their interest);
- Their reactions when they get in;
- Teaching Materials/instruments provided;
- The teacher's teaching method;
- Types of activities;
- How she begins and ends the session ;
- Mentioning the lesson's objective to students;
- The language used (more general/technical);
- The teacher/students interaction patterns TTT/STT (oral performance);
- Active participants percentage;
- The use of technicality;
- The focus of ICAO language requirement (language Aspects and Skills Development).

Formulaicity
- The use of formulaic sequences ;
- Kinds of formulaic language used;
- The frequency of formulaic sequences;
- The teachability of formulaicity (how are they implemented);
- The teacher's presentation and the learners' perception of such expressions;
- The way students acquire and memorize prefabricated chunks ;
- Using formulaic language in conversations ;
- The students' methods and strategies of memorization (note taking for example).

</div>

Table 3.4: The Observation Grid

This classroom observation takes place within Aures Aviation Academy - Batna with the attendance of fourteen students for four sessions. According to

Hancock and Algozzine (2006), there are five factors we took into consideration while designing and conducting the observation process/grid:

- The identification of what the researcher must observe in order to answer the research questions and help defining the objectives (the observation grid).

- The creation of an observation guide that includes the characteristics and components of the educational context, it also contains participants, date, activity, location, names and positions of persons under observation … etc.

- Seeking the comfort and trust of the participants by explaining: who, why, how, and for whom the investigation is occurring.

- Unlike other types of research instruments in which the researcher tries to keep his or her distance from settings and activities, the classroom observation process makes the researcher immersed in the process. Thus, s/he should know his or her biases and personal role in order to avoid any kind of prejudice that may jeopardize the study findings.

- A case study researcher while conducting his classroom observation should respect the ethics and legal requirements regarding research participants.

Following the previous factors and manipulating them into a shape that is suitable to our research requirements in order to get needed information, the researcher observes the learners' and teacher's practices during the courses while they perform a number of language assignments. During the session, the observer pays attention to the designed grid that includes directory information used to answer the questions on (table 3.4).

To sum up, case study research requires more attention from the researcher as every instrument requires its specific time, planning and effort. The investigator feels always close to his sample but this may affect negatively his findings and biases his results unintentionally.

3.16 Data Collection and Analysis

Data collection and analysis is an important part of scientific research in general and ESP course design on particular. It is a significant step of the whole ESP course design procedure as it provides the researcher with the necessary information that lead the study to valid outcomes.

3.16.1 Data Collection

Our Data collection procedure began with an interactional process with a student and two administrators of Aures Aviation Academy. For the sake of knowing more about aeronautics in Algeria and the training prepared for novice pilots. The beginning was planned this way according to our lack of knowledge on the aviation system in Algeria and that Aures Aviation Academy was and still is the only working private aviation school beside the department of aeronautics at Blida Public University. Later on, and after a period of approximately a month, the researcher pursued the data collection procedure by the classroom observation of ESP course under consideration, for describing and reporting the needed data.

The spotlight was mostly on the target situation, concerning the teaching/learning environment. The students' attitude towards ESP session, the teacher/student interaction, teaching materials, the course content, students' motivation and language proficiency, and finally the use of formulaic sequences by both teachers and learners in addition to a close look to the learners' communicative competence.

We followed this process by administrating two questionnaires for students (novice pilots and air traffic controllers) and for subject specialists; then, two interviews: one for ESP teacher, and another for our aeronautics professionals (a pilot and an air traffic controller).

3.16.2 Data Analysis

It is known well known among researchers that the case study research is considered to be a qualitative approach study, that is according to its exploratory nature rather than relying on data measurement. However, we intended to use a

combination of both qualitative and quantitative approach as "Using more than one type of analysis is believed to provide more reliable research findings since the latter are not compressed into a single dimension of measurement" (Hamzaoui, 2006:130- cited in Lamri, 2011, p. 72). For this specific matter, and as stated above by Hamzaoui (2006), it is quite valuable for a researcher to use a combination of the two approaches for the benefit of seeking validity and feasibility of the research outcomes.

3.16.3 Qualitative Research Method/ Analysis

The qualitative analysis relies on the researcher him/herself. In other words, it focuses on the interpretation of the results of his/her observation process. In the introduction to the third edition of their encyclopaedic handbook, Denzin and Lincoln (2005a) write:

> Qualitative research involves the studied use and collection of a variety of empirical materials—case study; personal experience; introspection; life story; interviews; artifacts; cultural texts and productions; observational, historical, and visual texts—that describe routine and problematic moments and meanings in individuals' lives.

They add,

> Accordingly, qualitative researchers deploy a wide range of interconnected interpretive practices, hoping always to get a better understanding of the subject matter at hand. It is understood, however, that each practice makes the world visible in a different way. Hence, there is frequently a commitment to using more than one interpretive practice in any study. (P. 4)

Therefore, this type of research analysis focuses on the results obtained from a large number of research instruments; thus, a great amount of data. On the same breath, this method lacks accuracy of results unlike quantitative research analysis.

3.16.4 Quantitative Research Method/ Analysis

The researcher conducts the quantitative research method through the analysis of data collected during the administration of questionnaires. This approach aims to quantify the outcomes of the analysis of questionnaires in order to draw an approximation of the learning needs. Lamri (2011) states that language needs and requirements are estimated through the measurement of the questionnaires' answers. Furthermore, the data are assembled in tables to simplify the needed comparison; and since we do not have a large sample, the researcher will not use any percentages, as the data will not be difficult to read or compare.

3.16.5 Distinctions between Qualitative and Quantitative Analysis

From another perspective, making a comparison between qualitative and quantitative research analysis helps researchers and readers to have a broader view on both concepts. Additionally, to enhance the feasibility of the use of both analysis methods. Ford (1997, cited in Mauch and Park, 2003, p. 19) in an article designed for psychologists, he makes the following distinction:

> ➤ Qualitative research relies on deduction. It reaches conclusions by reasoning or inferring from general principles to particulars. Quantitative research relies on induction, arriving at generalizations by collecting, examining, and analysing specific instances.
>
> ➤ Qualitative research requires the investigator to engage with the persons, events and ambience studied as an integral part of the study process. Most often, quantitative research calls for the investigator to remain detached.
>
> ➤ Qualitative research offers particular value in the process of generating new concepts or theories. Quantitative research focuses more on the testing of existing theories of generalizations.

- ➢ Qualitative research seeks to provide full and accurate descriptions of phenomena in all their complexity. The aim of quantitative research is to reveal or establish cause and-effect relationships in or among experiences or occurrences.

- ➢ Qualitative research attempts to discover and show the assumptions that underlie events or actions. Quantitative research focuses more on testing the operation of assumptions.

- ➢ Qualitative research uses natural settings as primary data. Qualitative studies deal mainly with statements and questions couched in words and with detailed descriptions of settings and events. Quantitative research constructs or controls settings and deals chiefly with amounts and numbers as primary data.

- ➢ Qualitative research begins with broad questions or problems and attempts to narrow them. Quantitative research starts withn arrow or specific phenomena and attempts to relate them to others as building blocks to illuminate larger matters.

- ➢ Qualitative research tends to deal with small samples and uniqueness. Quantitative research encourages studying large samples and prizes representativeness.

- ➢ Qualitative research considers the context of words and events an integral part of the primary data. Quantitative research tends to delete context or tightly control it to minimize the influence of affective nuances.

- ➢ Qualitative research depends on thoroughness and depth of reporting to demonstrate significance. Quantitative research utilizes statistical analyses, particularly employing probabilities to demonstrate significance.

We took advantage of this distinction drawn by Ford (1997) in order to tackle all aspects related to both quantitative and qualitative analysis; moreover, to benefit from the accuracy of quantitative analysis outcomes.

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	Research Design	
Instruments used	Data gathered	The analysis procedure Quantitative/qualitative
Students' questionnaire	Students' responses	Both analyses
Subject-specialists questionnaire	Specialists' responses	Both analyses
Operational-professionals interview	Professionals' responses	Qualitative analysis
ESP teacher interview	Teacher's responses	Qualitative analysis
Researcher's observational procedure	Results according to the observation grid	Both analyses

Table 3.5: Research Design

In addition, from the personal involvement and the better understanding of the subject matter (as mentioned that aeronautics is a vague discipline among ESP researchers in Algeria) guaranteed by qualitative analysis. We had to draw a link between the types of analysis used and the outcomes we got from different research instruments used in order to clarify the use of multiple types of analysis.

3.17 Pilot Study

The first step before commencing the practical part and the fieldwork of the study, pilot studies are necessary, as they are "tools in determining, in a preliminary fashion, the potentialities and perils of almost any research idea" (Mauk and Park, 2003: 21). Furthermore, they help to "…identify ambiguities, other problems in wording, and inappropriate items, and provide sample data to clarify any problems in the proposed methods of analysis prior to the collection of data in the study proper" (Weir and Roberts 1994:138). Some scholars take this even further as when Oppenheim (1992:48) says "everything about the questionnaire should be piloted;

nothing should be excluded, not even the type face or the quality of the paper!" .As a result, piloting the study can minimize the likelihood of delays or even failure.

Taking into consideration the nature of our topic and the setting in which we are conducting the fieldwork, we have decided to pilot two of the instruments (questionnaire, and semi-structured interview). The first helps us design an accurate set of questions and avoid any kind of misunderstanding or misinterpretation by the students or the subject specialists (instructors). The second is more of training as interviewing our professional informants may include unknown information about aeronautics by the interviewer. As a result, the researcher may use these data in order to add questions or modify others to obtain desired information.

The process of piloting the questionnaire was with the help of the head of installation at Aures Aviation Academy because of the absence of the English language teacher. The procedure was, relatively slow as students were too busy with their studies all day and practical training at the airport. Four students and two teachers helped conducting the pilot study for the questionnaire. As for the language, they all agreed and were satisfied to take it in English since it help us more this way.

Piloting the interview was more complicated. The interview with the air traffic controller took too long to conduct according to his occupational obligations and personal issues. For this reason, we have decided to carry out the pilot study with the international flights pilot since he was available at that period teaching at Aures Aviation Academy. Our informant preferred using French and Arabic during the interview.

As mentioned above, there were some restrictions and hurdles while piloting the study, which gave us the idea that the same would face us while conducting the interviews and questionnaires. Even though they were eager to help, the main constraints faced are in relation to time and availability of informants.

Lastly, the researcher carried out and finished the pilot study with success according to the modifications made and especially for the additions, he has not thought of at the beginning later provided by our informants. More specifically, the

professional sample. He conducts these modifications to guarantee the efficiency of the data collection process.

3.18 Field Work Procedure

At this part of the investigation, we have designed a plan to pursue in order to have all the information we need from the application of the data gathering tools. After we finished the pilot study, we kept in touch with our contact at Aures Aviation School, the audits manager, in order to keep our plan tactful. Our informants were too busy, so we had to take advantage of any minute we could get. Students had many assignments and training to go through, teachers with the same procedure, and administrators are always busy with paper work and programme/training design.

First, we began this process by delivering the students' questionnaire for the first group with the help of an employee there and the class instructor since this group is taking classes for the theoretical part of the training. The researcher had the chance to explain the process. Moreover, what he is doing for the students again after he had a first encounter with a couple of them, who informed their classmates on his behalf. Whereas the second, is a group of students who are on the practical part of their training in which they spend most of the time at the airport where the school has its own hangar.

Thus, we had to take the forms there via our contact at this school rather than wait until the evening as they get back to the accommodation area at the school building. The teachers'/instructors and administrators questionnaire was less complicated to conduct; still, it was difficult to find them since they were not available all the time. Afterwards, and in order to enhance the validity of our data outcomes, we have delivered the students' questionnaire for the other novice aeronautics professionals who study air traffic controlling at the University of Blida or in an official training at the military facilities in Reghaia-Algiers. We had difficulties reaching this small sample of five ATC students, and our professional ATC interviewee provided the necessary assistance.

The second step was conducting the interview with the aeronautics professionals and the English language teacher. Our first professional informant was the pilot who had courses to deliver at the same school but he was too busy that we had to divide the interview into two parts, one per day. The second informant was an air traffic controller who works at Batna Airport. The process took much more time than was planned for the interview due to his job requirements and personal issues. The researcher carries out the interview on a later date.

As the researcher explained the process and the aim of our study for students, instructors, and administrators for their questionnaire, he had the same experience with the specialized informants. As far as the interview is concerned, the pilot and air traffic controller provided more information as he tried to give them the chance to use whatever language they desire while we used an audio recorder (after their permission) that would be interpreted later on.

Alongside the language choice he provided; he made sure that the informants were at ease, and ensures avoiding any kind of disturbance. Moreover, as a helping option in this research instrument as stated by Perry (2011), we took advantage of the interpersonal connection formed by the interviewer and interviewee in order to monitor directly the comprehension of the questions and the modification in case of any kind of misunderstanding occurs.

3.19 Conclusion

ESP researches require an organized set of stages that are based on certain methods. This process begins with needs identification and ends with a course design based on the former. In order to seek answers for our research questions and test the hypotheses. This chapter describes all the components of this procedure in addition to what it requires systematically. In this case, the researcher illustrates the study method, chosen instruments and procedures, and sample population. In addition to the situation of the English language in the Algerian aeronautics field to design a suitable course for our sample. All of the latter relies on the analysis of the data obtained and revealed in this chapter to form the framework of the next one.

CHAPTER FOUR: Learners Needs Taxonomy

CHAPTER FOUR: Learners Needs Taxonomy

4.1 Introduction

4.2 The Status of Aviation English in Algeria

4.3 Data Analysis

    4.3.1 The Quantitative Approach

    4.3.2 The Qualitative Approach

4.4 Method, Analysis, and Summary of Results

    4.4.1 ESP Students' Questionnaire

    4.4.2 Subject Specialists Questionnaire (Teachers of Specialty and Administrators)

    4.4.3 Aviation Professionals' Interview

    4.4.4 ESP Teacher Interview

    4.4.5 Classroom Observation Results

4.5 General Summary of the Main Results

4.6 Conclusion

4.1 Introduction

In ESP study and research, needs identification and analysis is the major aim of the investigation. This chapter is concerned mainly with the analysis of the data collected in order to identify first: the target needs: i.e. the language needed within the target situation; more accurately, it is concerned with the language use requirements in a specific situation. Secondly, the learning needs, which are specifically process oriented, and related to the classification of learners' necessities, lacks, and wants during their educational careers. It is also in close link to the description of the entailed learning situation. All of the latter comes as a process that results a course design sample that includes formulaic sequences.

The data analysed through the research tools mentioned above will stand as numerical data that helps the researcher to answer the research questions. Furthermore, to create taxonomy of the students' needs to help create suitable course design samples.

4.2 The Status of Aviation English in Algeria

According to several factors, including historical and social reasons, the English language is a second foreign language in Algeria. Even though the most used language around the world is taught in both middle and secondary educational levels, English is not widely used within the Algerian society. Be it for instructional, governmental, or societal functions, French is still the preferred foreign language in Algeria (Hamzaoui, 2006; as cited in Lamri, 2011).

No matter which field they belong to, most of Algerian scholars and researchers agree to encourage the use of the English language in higher education and research. As a result, educational policy makers intend to promote the status of the English language to be integrated in the new globalized world and be a part of new international communicative cell, so our learners and researchers could be up to date within science, technology, and human sciences, and "to keep abreast of the newest research work" (Lamri, 2009, p.84).

In aeronautics, English is currently the official language for communication via radiotelephony and for most paperwork. Since 2003, the ICAO (2009) has stated a requirement that all aeronautics professionals who are involved in international air traffic should reach fluency. Kim (2009, p.23.1) adds "... Hence the recent International Civil Aviation Organization (ICAO) policy places the onus on non-native users to bring their English to an appropriate standard". Nevertheless, Algerian aeronautics professionals and novice pilots and ATCs are both, respectively, teach and are taught the fundamentals of aviation using the French language (see 1.5 and 3.4).

4.3 Data Analysis

Data analysis is a very important step in scientific and social research processes. Many definitions provided by scholars describe the procedure and its stages. Denscombe (2007) identifies it as the process that includes the search for objects that lie behind the upper visible layer of collected data. In other words, the analysis is the phase where any researcher probes the data collected into a shape that helps interpret the findings into a principle used in a specific situation. To search for things under the surface of data collected, i.e., data analysis, the researcher goes through a series of steps that define the current procedure's function. Cohen et al (2007) clarifies "Data analysis is a body of methods that help to describe facts, detect patterns, develop explanations, and test hypotheses. It is used in all of the sciences" (p. 19).

Following the last idea by Cohen et al, we can say that data analysis process encompasses the use of a single method, approach, or technique. Also, and in order to realise the desired goal of this procedure, most researchers, our work included, use both qualitative and quantitative approach to "draw plausible and coherent conclusions well supported by evidence, because much educational research combines qualitative and quantitative methods in various ways and to varying degrees" (Allouch, 2012, p. 87).

Quantitative data analysis provides more accurate results "numbers", while qualitative data "words, and everything else" offers the research with more details. Thus, the combination of both approaches comes as requirement for research. Blaxter

et al (2006) clarifies "the quantitative and qualitative also have a tendency to shade into each other, such that it is rare to find reports of research which do not include both numbers and words. Qualitative data may be quantified, and quantitative data qualified" (p. 199).

4.3.1 The Quantitative Approach

This type of analysis, as mentioned earlier, deals mainly with numerical data. The display of responses and feedback, the researcher encodes or allocates a numerical value, percentages, and/or a measure of proportion. Final calculations mostly reveal averages for a summary of measurements.

4.3.2 The Qualitative Approach

The second type of analysis assigns the demonstration of data in the form of words, either by "raw" forms of data, or second-hand transcription by the researcher him/herself. If intended for publication, these raw collected data may need the researchers' transcription and clarification for a better understanding as far as readers are concerned.

4.4 Method, Analysis, and Summary of Results

This section discusses an important part of the research procedure. The researcher provides a thorough study of the analysis methods he opts for in this research.

4.4.1 ESP Students' Questionnaire

The questionnaire designed for our target students consists of 20 items divided into four categories: (A) General questions, (B) Students' English language background, (C) Students' attitudes towards ESP session, and (D) Students' target needs (See Appendix 01). The researcher applies the partition method to organise data and the outcomes after the analysis process.

Our students sample comprises of 20 novice pilots who belong to Aures Aviation Academy and five (5) air traffic controllers from the military facility of Reghaia-Algiers. The following section is devoted to a thorough description of the questionnaire items, i.e. close-ended, open-ended, and mixed questions.

4.4.1.1 Method

This data collection method for target students aims at eliciting information concerning their English language background and use. Their attitude towards the session, as well, is very crucial to the accuracy of data. The outcomes the researcher aims to obtain will be the foundation to design and adapt ESP course for our sample under study. The latter rely on target needs we spot during the analysis of the same facts.

The 20 items designed for the questionnaire are as follows:

Questions from 1 to 3: are labelled as "general questions" about target students' gender, age, and English language proficiency level from their perspectives.

Questions from 4 to 6: are devoted to students' English language background. Including, the number of years they had English, and current instructional courses in both general English and ESP "Aviation English as an example".

Questions from 7 to 13: are asked to get data concerning: the importance of English language in general and ESP course in particular; the frequency of attendance and participation (open-ended), and difficulties of acquiring and mastering the target language (options provided).

Questions from 14 to 20: seek to gather data on learners' target needs. Also, contexts where English is required, language skills needed, and motivation. At the end, the researcher added an open question to give the chance to learners' to share their ideas and perspectives on the subject matter.

4.4.1.2 Analysis

The data gathered from the students' questionnaire were advantageous for the research. The information permitted the researcher to establish accurately their needs,

wants, and some of their lacks. Besides, he was able to understand more the target situation. Moreover, what the situation requires in terms of language use.

Sequence1 : General Information

Question 1 : Participants' Gender

Age	20	21	22	23	24	25	26	27	29	30	31
Frequency	01	01	02	03	02	01	03	04	04	02	02

Table 4.1: Students' Age

As we may notice in the table above, our respondents' ages differ as if they do not belong to the same educational level. In fact, the eleven years divergence (between 20 and 31 years old) comes as a result of Aures Aviation Academy enrolment acceptance criteria. Earlier mentioned in this study, candidates should fulfil a number of criteria like an interview with the training programme developer, financial, and also educational requirements "Bac+2 years at the tertiary level" (See Appendix 07)

Candidates may not succeed for more than one reason; worth mentioning, the interview does not go well, unacceptable educational level, or even a full class.

Question 2: Students' Gender

Gender	Male	Female
Frequency	23	02

Table 4.2: Students' Gender

The aeronautics field, more specifically, pilots and ATC operations in Algeria does not seem to attract the attention of many females. As we may notice above, only two female students is in a group of 25 students. To support this argument, all the instructors "subject specialists" in Aures Aviation Academy who were once pilots and ATCs are males.

Question 3: English Language Proficiency (Level)

Level	Beginners	Intermediates	Advanced
Frequency	07	17	01

Table 4.3: Students' Perspective on Their Language Level

Most of students believe they have an intermediate level of language (17 learners). The other eight (8) are among eight (7) who consider themselves beginners in terms of language knowledge and use, plus just one who is confident of his language skills and considers him/herself advanced.

Sequence 2: Students English Language Background

Question 1: Students' Previous Experience in English (English Studies Duration)

N° of Years	06	07	08	09	10	12
Frequency	04	06	06	05	02	02

Table 4.4: Students' Previous Experience in English

Most of students had at least six or seven years studying English between middle, and secondary school levels depending on the classical or the new educational programme. Whereas students who had more than this duration, mostly had courses at the tertiary level or private language schools.

Even though Aures Aviation Academy requires (Bac) baccalaureate degree in addition to two years at the tertiary level to be enrolled, some of the students did not have English language courses at university.

Sub-question 1: Types and Duration of English courses Students had after secondary school

Answer	Frequency	Type of courses
No I did not have any	8 students	-
Yes I had sessions	17 students	- University courses - OACI (ICAO) programme - Private schools (GE/ Av-Eng) - TOEFL test training

Table 4.5: Types and Duration of English Students Had after High School

The researcher preferred to add the following description for the table above because of the vast difference between the type and duration of courses taken by our participants. Eight students stated that they did not have any specific type of English language courses. However, three of them have been learning English independently through books and internet.

On the other hand, seventeen (17) students had various types and durations for their post-secondary school English language instruction. Six Students had two years of instruction at the tertiary level (Aures Aviation Academy educational requirements); while three other students had four years.

Studying in a private language schools had its fair share as well, six students had courses there for one year (two students), two years (two students), and three years (two students as well). Finally, one student had the TOEFL test training and another had English for aviation programme provided by the ICAO abroad (International Civil Aviation Organisation).

Question 2: The Nature of Courses Studied

Nature of the course	General English	Aviation English	A mixture
Frequency	08	01	08

Table 4.6: The Nature of Courses Studied After Secondary School

The question analysed and discussed gives more information on the different types of sessions attended by our participants concerning English language courses after secondary school. Seventeen (17) students out of twenty-five (25) have gone through target language trainings after they got their baccalaureate degrees. This sample is divided, as shown above, between taking courses in general English eight, aviation English "the OACI programme is French for the ICAO" (01), and finally a mixture of both input that starts with general English eight (08).

Question 3: The Effect of English on learners' Aviation Studies

Answer	Yes	No	Left blank
Frequency	20	02	03

Table 4.7: The Effect of English on Learners' Studies

The table above displays the participants' answer on the question "Does English help you in your studies? How?" the majority of students responded positively relying on the following reasons: (the reasons are stated according to the frequency of their occurrence within students' response, from the most to the least).

Four students believe that almost all of the documents they need in their field are in English and three see that English is necessary for communication and be aware of updated references. On the other hand, three students state that they need English in their jobs and two think that their studies and updated information are in English. Two students provided more in depth clarification by stating that the identifications of materials and indicators on and off plane are in English.

Other students had similar answer but used different words, two of them see that the "best" videos and documents are in English, and two others agreed without stating any further elaboration. Finally, a student had a comparable response as he states that most valuable information for him and his peers are in English, the last one took his response to a broader level, and yet away from his target needs by stating that English provides "worldwide opportunities".

Following up on their replies, our respondents are thinking ahead of the use of the English language. Mostly, novice pilots and ATCs are struggling with the use of

data at hand, i.e. documents and materials related to aeronautics, as most of it is in English. In addition, students have difficulties in dealing with videos and communications especially in listening since it is mainly the most important skills required in aviation in general and radiotelephony communication in particular.

Sequence 3: Students attitude towards ESP session

Question1: The Importance of English

Importance of English	Not important	Not very much	Important	Very important
Frequency	00	00	02	23

Table 4.8: The Importance of the English Language for Aviation Students

All novice pilots and ATCs in our sample population acknowledge the importance of English vis-à-vis their studies and future careers. Twenty-three (23) of them consider English very important while just two characterised it as an important subject.

Question 2: The importance of ESP course

The importance of ESP course	Yes	No
Frequency	22	03

Table 4.9: ESP Course Importance

From students' answers, it is noticeable that they recognise the importance of ESP course in relation to their studies and future careers. Twenty-two (22) students answered positively while three of them had a negative answer. The former have provided more details concerning their recognition of ESP course. The researcher cites them as follows:

Students stated that it helps their studies, and others believe that they accept it; however, they want more technical English. Students say they enjoy the student-

teacher interaction and they feel more comfortable in such environment. While students said, they would like a professional English course, which means they are more interested in jumping common core English and start studying aviation English even if the current sessions consist of aeronautics English.

Regarding their answers, it seems that either, they do not know that technical English is the second part of their programme, or they prefer to avoid general English and move on directly to aviation English.

Question 3: Degree of satisfaction with ESP course content

Degree of satisfaction with ESP course content	25%	50%	75%	100%
Frequency	00	13	09	03

Table 4.10: Students' Degree of Satisfaction with ESP Course Content

According to our participants' responses, there might be a number of changes and adjustments to deal with for a better ESP session. The 22 students (13 – 50% and 09 – 75%) were not fully satisfied with ESP session as they asked for more communication/pronunciation, and more speaking/listening. One of these students replied with "the speaking section is out of the teacher's plan". This gave the researcher more information concerning the language practice (specifically the oral performance) that is highly required for the aeronautics professionals by the ICAO in the form of "reaching fluency".

Question 4: Classroom attendance

Regular attendance	Yes	No
Frequency	23	02

Table 4.11: Students' ESP Course Attendance

The majority of students attend ESP course (23 students) because of the strict regulations put by Aures Aviation Academy and the students' constant availability since the school provides accommodation at the same pedagogical building. On the other hand, the reason provided by most of the students who attend on a regular basis was devoted to the importance of the English language for their studies.

Question 5: Classroom participation

Classroom participation	Yes	No
Frequency	20	05

Table 4.12: Students' Classroom Participation during ESP Course

Considering this question, twenty (20) students stated that they participate in classroom activities and exercises since they think that it helps them improve their language performance even if the "oral performance/communication" is not sufficient according to the same sample. The other five students who responded negatively think that it is difficult for them to speak "voluntarily" unless spoken to.

Question 6: Difficulties faced by students in learning the English language

Difficulties encountered	Frequency (25/25)
To write reports	4/25
To read aviation documents and books	12/25
To speak with classmates and instructor(s)	22/25
To listen and understand native speakers talking about aviation	21/25

Table 4.13: Difficulties Faced By Students in Learning the English Language

The difficulties designed above by the researcher are a combination of the language skills in relation to the students' language requirements for their future careers (Pilots and ATCs). The data analysed, specifically from this question, revealed interesting outcomes summarised in the following:

The highest frequencies noted are on speaking and listening with 22 and 21 out of 25 students respectively. This might be the effect of their unfamiliarity with aviation English. Yet that seems very difficult to understand especially on radiotelephony. The researcher had to consider this but without neglecting the idea that these two skills are the most difficult ones for a foreign language learner who seeks to communicate orally. In addition, we wanted to spotlight on the ICAO language requirement that states, as mentioned before, the importance of reaching fluency for pilots and ATCs on radiotelephony; thus, listening and speaking.

Question 7: Reasons for such difficulties

Reasons	Frequency
Lack of practice in and outside the classroom	24/25
Insufficient period of instruction	01/25
Lack of reading	06/25
Lack of interest	10/25
Other	02/25

Table 4.14: Reasons Provided By Students for Their Language Learning Issues

According to students' responses, the highest frequency (24 out of 25) refers to the lack of practice inside and outside the classroom. Thus, this is the cause of the most faced difficulties in learning the English language, in addition to the crucial importance of its oral part (oral practice of language) for their future careers. As for the other reasons, ten (10) students believe that lack of interest also affects their process of learning the language. Six students referred to the lack of reading while just one mentioned the period of instruction as a hurdle for his/her learning process. Finally, two students added lack of communication as a factor that influences the efficiency of the learning process.

Question 8: Time allocated to ESP course

Satisfaction towards the time allocated to ESP session	Yes	No
Frequency	24	01

Table 4.15: Time Allocated to ESP Course

Twenty-four out of twenty-five respondents were satisfied with the time allocated to ESP sessions which was five times per week for two hours, and that this depends the programme, assessment duration... etc. Only one student was not satisfied with ESP course timing but s/he did not provide any reason or suggestion.

Sequence 4: Students' Target Needs

Question 1: Areas of language use

Areas of language use	Frequency
Internet	21/25
Books (studies)	16/25
Interaction	07/25
Others	04/25

Table 4.16: Students' English Language Use

In Aures Aviation Academy, instructors teach students using the French language for aeronautical terminology and sometimes Arabic for in-class discourse and practices. As a result, English occurs only in ESP course; however, outside of class, novice pilots and ATCs use English mainly online for studies or entertainment twenty-one out of twenty- five (21/25). In addition, sixteen out of twenty-five (16/25) of students use books in English to stay up-to-date with the global aeronautics community, as it is the language of most recognised sources. Finally, other students declared that they use English to chat or out of necessity when travelling abroad like asking for directions (4/25).

Question 2: learners' motivation

Participants' answers	Frequency
Yes, I am motivated.	24/25
No, I am not.	01/25

Table 4.17: Learners' Motivation towards Learning English

According to the data analysed above, nearly all of our learners said that they feel motivated to learn English. However, their answers were balanced between the personal preference (I like it), importance (important for studies), improvement (I want to upgrade all skills), obligation (we have to, it is the language of aviation), and necessity (needed for the job). The only student who was not motivated to learn English justified his answer with "no time".

Question 3: Language skills importance

Language Skills classified first most important	Frequency	Language Skills classified second most important	Frequency
Listening	17/25	**Speaking**	17/25
Speaking	02/25	Listening	07/25
Reading	00/25	Reading	03/25
Writing	00/25	Writing	03/25

Table 4.18: Students' Classification of First and Second Most Important Skill

Students' answers revealed that they are actually aware of most important language skills for them in relation to what is required from their future careers. In other words, novice pilots and ATCs in our sample study knew that they must have a good control over listening and speaking since it is highly required in their future jobs when communicating via radiotelephony as the mostly used manner of communication in this field of work.

Question 4: Students' wants and objectives from learning English

Students' responses were on direct relation to their job requirements. Most of students focused on learning to communicate effectively by enhancing listening and speaking. Moreover, they declared that well-formed language structures and accurate pronunciation would help them have a better oral interaction for radiotelephony. One of the participants pointed out that the target language culture would help him/her communicate efficiently. Respondents did not neglect vocabulary especially expressions related to aviation. Lastly, only three students set their goals vaguely to learn what they must learn for the job only.

Question 5: Students' awareness of ICAO language requirements

Responses	Frequency
Yes	23/25
No	00/25
No Answer	02/25

Table 4.19: Students' Classification of First and Second Most Important Skill

Nearly all students had an idea about the language requirements stated by the ICAO, maybe not in detail, but they recognised that English is the aviation language and the principal language used in this field. As for the two students who did not respond, the researcher believed that either they missed it or did not understand the question.

Question 6: The importance of English for our sample in relation to the ICAO requirements

The previous question triggered the load of information that was held by our participants concerning the status and the role of English in international aviation. Students characterised English as the first international language and the most important in aviation. Additionally, one of them stated that it is essential because of "different people who fly". Here we can deduce that s/he meant that English is a lingua franca. Among the replies provided that concern the same meaning, some students believe that English helps and simplifies interaction between different pilots

and ATCs. Ultimately, four students were more aware and could depict more accurate information; they related the use of English to the insurance of safety as a measure stated by the ICAO through the following replies "for safer flights, less (fewer) accidents and incidents, and it is essential and required".

Question 7: Students' suggestions

Just few students provided suggestions on this subject matter (06/25). Five of them recommended that the improvement in English for pilots and ATCs should exceed aviation English terminology or phraseology; while the sixth added that, learning the English language presents an essential part of getting all the information needed for aeronautics in general.

4.4.1.3 Summary of the Results

The analysis of the gathered data in this section shows the awareness of the participants under investigation of the great importance of English in their field of study and future career. Most of students are motivated to learn English because of its significant importance as mentioned before. Additionally, most of them did not lose contact with English as they had courses after graduating from secondary school and before enrolling in Aures Aviation Academy.

As far as ESP course is concerned, the majority of students acknowledge the importance of the session and its positive effect on their studies. Even though our participants are quite satisfied with the time allocated to ESP course, students prefer to have more listening and speaking, and more oral interaction and pronunciation in the course content, as they are well aware of their future job requirements. The former data consolidated the demonstration of the novice pilots' and ATCs' target needs. Most of them, if not all, have difficulties dealing with speaking and listening and they related it directly to the lack of practice in and outside of the classroom. One cannot ignore such issues since successful oral communication presents a solid pillar of ensuring flights safety.

To sum up, students wants were summarised in reaching a certain level of language proficiency to have a good control over radiotelephony (oral

communication) as it is, by far, the most important form of interaction in aviation. Interestingly, some students were attentive for the significance of plain English in aviation when they mentioned that the pilot's knowledge of English should exceed "English for aviation" and that is the main concern of this research.

4.4.2 Subject Specialists Questionnaire (Teachers of Specialty and Administrators)

In this section, the researcher presents the methodology and the analysis of the questionnaire delivered to 11 subject specialists among them seven instructors and four administrators who work all for Aures Aviation Academy. The objective of this data collection/analysis process is to inquire their English language background and current use. Furthermore, to obtain valid data concerning the GE/ESP course in their academy and their perspective on using English in their specialty courses rather than French or Arabic.

4.4.2.1 Methodology of the Questionnaire

The researcher designs this questionnaire for the following participants:

Instructors:

✓ Air Law/ Operational procedures/ Telecommunication instructor (a former ATC)

✓ General Knowledge/ "cellule system" instructor (a former pilot)

✓ Flying mechanics and aerodynamics instructor (military)

✓ General navigation/ Radio navigation instructor (a former ATC)

✓ Meteorology instructor

✓ Human factors instructor (a former pilot instructor)

✓ Cellular system / flight preparations and followings instructor (a former pilot)

Administrators:

✓ The school's General Manager: He has been working at the academy since its establishment; he is in charge of all of the institution's finances, staff, and recruitments.

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✓ The Training Administrator: he is in charge of the preparation of programmes and conducting interviews with interested candidates. He has been with the Academy since 2001.

✓ and the Administrator of Installation/ Audits are chosen to get more information on English language course and ESP teacher, in addition to the classroom environment and the target situation in relation to the English language learning process of the school in inquiry.

✓ The assistant/receptionist is also questioned for the same reasons taking into account her knowledge of the aviation sector and her English language studies (licence degree).

The main aim of this questionnaire was an attempt to reveal the administrators' perspective on the implementation of the English language in their training programme and the language requirements for the aviation profession. In the same vein, this inquiry seeks to get information on the personal and professional use of English for instructors of specialty modules. As well, to get their opinion on teaching their own subjects in English, their language skills preference, and finally encourage the use of this language in and outside of the classroom.

The following were the questions presented to our participants:

Questions 1-3: Educational and professional background,

Questions 4-7: English language background,

Question 8-9: Language use (personal/ professional), and viewpoints on ESP course presented,

Question 10: The use of English in all subjects of specialty,

Question 11: Instructors collaboration to enhance the use of English in all modules,

Questions 12-13: The importance of ESP course,

Question 14: Language skills closely related to aviation,

Question 15: Suggestions and recommendations.

4.4.2.2 The Analysis of the Questionnaire

The following section discusses the analysis of the subject specialists' questionnaire:

Question 1-3: The participants' educational and professional background

Informants	Qualifications	Current Status	Function	Former airport experience
Informant 1	Licensed ATC	Instructor/ Ground Instructor	Air law/ telecommun -ication	Former ATC
Informant 2	Licensed Pilot	Instructor	Cellule system	Former pilot
Informant 3	Licensed military pilot	Instructor	Aerodynamics Mechanics	Former pilot
Informant 4	Licensed ATC	instructor	General navigation	Former ATC
Informant 5	TS engineer Aeronautical weather	Instructor	Human factors	Pilot instructor
Informant 6	Meteorology engineer	Instructor	Meteorology	Batna Airport meteorology manager
Informant 7	"ATPL" licensed pilot	Instructor	Cellule system	None
Informant 8	Licence in economical sciences	General manager	Finance and accounting	None
Informant 9	Licensed military pilot	Training programme manager	Training programme developer	Former helicopter pilot (captain)
Informant 10	Licensed engineer (installation)	accountable for quality and auditing	Installation and auditing	Office employee
Informant 11	Licence degree in English	Secretary and assistant	communication	None

Table 4.20: Informants' Qualifications, Current Statuses, and Functions.

This question is designed to have more information on our respondents' educational and former professional backgrounds. As for instructors, they are all former pilots and air traffic controllers. Administrators on the other hand are professionals in aeronautics or economics. This table elaborates as well as respondents' qualifications or field of interest, their current functions at the academy.

Question 4: Languages spoken fluently

Languages spoken fluently	Frequency
Arabic	03/11
English	04/11
French	11/11
Other	00/11

Table 4.21: The Informants' Fluently Spoken Languages

According to the analysed data, all the respondents speak French, for reasons such as the language used for studies (educational background) and current profession (instruction or managing). Moreover, French is a professional and a second language in Algeria. Even though English is the official language of aviation, the authorities still slightly neglect it in terms of using the language in teaching specialty subjects as instructors use predominantly French.

Question 5: Informants' English language proficiency

Informants' language proficiency	Frequency
Beginner	01/11
Intermediate	09/11
Advanced	01/11

Table 4.22: Subject Specialists' English Language Proficiency Level

Taking into consideration our subject specialists' professional qualifications, all the current instructors who were pilots and ATCs had an intermediate language

level in English; however, the assistant who holds a licence degree in English described her language proficiency as "advanced" and the general manager answered "beginner".

Question 6: Types of English language courses taken by informants

Types of English language courses	Frequency
General English	02/11
Aviation English	00/11
Both	09/11
Other	00/11

Table 4.23: Of English Language Courses Taken By Informants

According to the answers stated on the previous question, all of our instructors 07 had both general and aviation English since it is a requirement for their former careers. Additionally, two of the administrators who had studies related to aviation had both types of courses. As for the manager and the assistant, they had only general English courses.

Question 7: The duration and the level in which respondents took their English language courses.

Our respondents' answers were diverse because of the different types of trainings and institutions in which they had their educational careers. The instructors had their training programmes in various international institutions abroad after they finished secondary school or licence/engineering degree. Thus, they had at least six years of general English (middle and secondary level) in addition to courses taken in the tertiary level or specialised institutions (from two to seven years).

The same process two of the administrators went through as they had specialised aviation studies. The general manager had just general English studies in both middle and secondary levels, while the assistant had the same in addition to her university courses in English when she got a licence degree in applied linguistics.

Question 8: Languages used for occupational requirements.

In this chapter, we have mentioned the over use of French in the field of aeronautics in Algeria, be it for educational or professional purposes. Our respondents' answers concerning the language use in their jobs were as follows.

For paper work, French was the dominating language for both instructors and administrators. Nevertheless, one of the administrators who deals with contracts and bills stated that sometimes the English language occurs just for technical necessities.

The staff uses the French and the Arabic languages in meetings for working in the academy or outside of it, with consultants from the ministry of transportation for instance. The researcher found out more information while discussing the matter of conferences with instructors and administrators. They do not attend many seminars or conferences mainly because of the rare occurrence of such professional gatherings on the national level. Internationally, our respondents stated that they have attended a number of seminars and the language depends on the country in which the seminar is held. Nevertheless, they mostly attend the ones organised in French speaking countries.

Finally, most of instructors and administrators use French first and sometimes English for their web search.

Question 9: Using English in specialty subject courses

This question seeks only teachers' responses to investigate the occurrence of English in their specialty courses and the frequency of its use. All of the 07 teachers had the same answer; they declared that they use French and Arabic while teaching. However, the use of English is limited only for technicality and some needed terminology.

Question 10: subject specialists' perspective on using English for instruction

This question addresses the use of English as an instruction language instead of French/Arabic. Most of instructors think that it would be a good idea to introduce their specialty courses using English but they prefer French since they think it helps them provide more information according to the educational background.

Nevertheless, they said it would take time to be adapted to using another language for instruction even if it is beneficial for students practice more of English related to aviation. On the other hand, administrators recommended the use of English for instruction since it helps novice pilots to reach fluency and overcome language difficulties faced by most aeronautics' professionals like hesitation and mispronunciation.

Question 11: Subject specialists and ESP teacher collaboration

The investigator used this question to seek subject specialists' viewpoint on collaborating with ESP teacher for the sake of improving students' English language performance. All of our respondents answered positively to this preposition without providing any information on the way of applying this cooperation.

Question 12: specialists' opinion on the necessity of learning English for novice pilots

All our informants were in favour of the necessity of learning English for novice pilots and ATCs. They proposed a number of motives worth mentioning "the world's language" (i.e. lingua franca) and occupational purposes, most importantly, radiotelephony communications and procedures.

Question 13: specialists' degree of satisfaction on ESP course duration and content

Our informants, collectively, agreed on the efficiency of ESP course in terms of time and content. They provided similar reasons for their answers like "having everything about aviation- AOCI programme (ICAO)" and others claimed that the programme consists of sufficient information about aviation.

Question 14: Most important language skills for novice pilots and ATCs

Subject specialists including both administrators and instructors focused more on speaking and listening as the most important language skills required by their profession. This came in parallel with both ICAO language requirements and

students' wants. As a result, we came to realise that those two skills are definitely the most needed for aviation mainly through radiotelephony communications as the predominant means of communication in aeronautics. To link our research objectives with these findings, formulaic language as positive factor affecting language learners' conversational competence is highly required for oral communication in aviation especially for non-routine situation where plain English takes place.

Question 15: suggestions and recommendations

Our respondents' suggestions and recommendations were similar in terms of language requirements. Most of them advocated the use of English instead of French and Arabic. Additionally, they focused on the practice of language to enhance fluency. Learning plain English took its place in their suggestions as well; they repeatedly mentioned the students' limited use of the language (just aviation phraseology) and proposed the use of language in general to communicate, as they are sure of its necessity even in radiotelephony. Finally, subject specialists did not have any disagreement on ESP session's duration or content.

4.4.2.3 Summary of the Results

The data collected and analysed from subject specialists' responses were beneficial and directly related to the investigator's research objectives. Most of the respondents had a vast experience as aviation practitioners; this helped the researcher to get accurate data. As far as the aviation language is concerned, English presents both a challenge and a motive for our learners. The ICAO language requirements stand in confrontation with non-native speakers to become professional pilots and ATCs.

Our respondents, and according to their fieldwork experience, consider that it is inevitable to reach fluency in English since it is highly necessitated in aviation communication. In addition, the courses taken by our respondents were insufficient and needed more language practice before becoming a pilot or an ATC. Thus, they recommended the persistent practice of language in general and not just aviation English (aviation phraseology). Instructors stated that they use French and Arabic to

teach their subjects, this minimises the chances of English language practice; thus, reaching fluency. Additionally, the English terminology used in their sessions is in relation only to aviation and plain English does not exist as required during the sessions.

As a result, students cannot easily fulfil the ICAO language requirements generalised in reaching fluency. Even though the specialists recognise the importance of such requirements in aviation, and the importance of plain English to non-routine situations, they still rely on French and Arabic for instruction and communication.

4.4.3 Aviation Professionals' Interview

The present section aims to analyse of the data collected from aviation professionals' interview. Unlike the former subject specialists we questioned, the following two aviation professionals are currently on duty working as a pilot (captain) and an air traffic controller.

The aim of this interview is to draw a link between what these professionals have taken as GE or ESP courses and the use of English in their current occupations. In addition, the researcher seek to extract information on their contemporary use of English in their jobs and the degree of proficiency required to guarantee the safety of flights and avoid any kind of breakdown of communication. Furthermore, and after we figured that the French and Arabic language were mainly used for instruction, we mean to discern the language used for radiotelephony on both national and international flights, and if the participants' educational background (on English) has helped them in their careers.

Finally, we intend to pinpoint our professionals' judgment on the relationship of English as a sole language for aviation to any kind of incidents or accidents they encountered personally, noticed, or heard of.

4.4.3.1 The Interview Analysis

The following analysis of the interview designed for professionals presents an important and a beneficial source of information for the researcher. The importance lies mainly on their experience as students and as current professional. This would

help the researcher to identify the English language learnt through ESP course they took, and the language they use presently on their jobs. Additionally, we will be able to draw a link between the two and discover the target/ learning needs especially the ones required by the ICAO.

Question 1: Our specialists' educational and professional background

The pilot had different training programmes abroad (France and Switzerland), but before that, he studied in Algiers and got a degree in mechanical engineering (cellule propulsion). His professional career was quite rich as he was a pilot in Salvaza then for Air France Company. After, he occupied a post in Switzerland called "agent piper international –Switzerland". Additionally, he worked as a maintenance chief and a chief captain "commander" for several years.

The air traffic controller studied for two years at the science and technology faculty at the University of Batna. Then, he pursued his studies and got a magister degree in electro technique engineering. According to him, he noticed a newspaper announcement about trainings provided for engineers to become ATCs. He sat for tests in his specialty in addition to English and French; then had a two years training and became an ATC. He also had training at Houari Boumediene International Airport in Algiers, and he currently works at Batna Airport.

Question 2: English language proficiency level

According to our respondents, they believe their English language is operational (intermediates). As for the reason behind this answer, they argue that the efficiency in communication is what matters and the English language level they hold is set on a mere occupational ground and for job necessities.

Question 3: The professionals' perspective on the English language in their field

They assume that English presents the official language of aviation and it is actually, needed to communicate with "strangers" (i.e. lingua franca). They also believe that English should not be only for international communications but also on

national flights to get used to it and avoid any breakdown of communication when promoted to international flight level.

Question 4: English language use

The respondents were precise and concise in their answers; they stated that English occurs only at work and only when needed. Otherwise, French and Arabic are the predominant languages for them.

Question 5: Areas in which English is used

Both our respondents mentioned radiotelephony as the most used means of communication in their domain. Otherwise, the use of the English language is minimal for other uses except reading manuals that happens rarely.

Question 6: Using English outside of their working context

The pilot and the ATC did not show interest in using English most of times. They mentioned a rare use of online chatting with foreign colleagues or web search.

Question 7: communication with native speakers and speech obstacles encountered

Both aviation professionals have dealt with native speakers within their area of expertise, mostly radiotelephony communication. The communicative obstacles faced by the two specialists were similar according to the nature of assignments where English is required. The pilot admitted that it was not easy to deal with native speakers because of the pace of speech that was challenging them to keep up with. Even though it is prohibited by the ICAO to use difficult terminology 'in plain English" and speak in a fast pace, a considerable number of native speakers choose to ignore this point and jeopardise the succession of the radiotelephony communication, as the pilot explains.

On the other hand, the ATC was more persistent on this matter by blaming native speakers for endangering radiotelephony communications by deviating from the use of official phraseology designed for routine situations, to the overuse of plain

English. He stated that sometimes he just "follows the flow of the communication and speculates the phases of flight like boarding, taking off ... etc". This, and from an aeronautical safety perspective, might be a very risky choice taken by the ATC giving the context he works in "Batna Airport" which is considerably easier, calmer, and less busy than Algiers International Airport for instance.

In addition to the quick pace of speech, and difficult vocabulary stated by the pilot; the ATC acknowledged that occupying more time on radiotelephony is definitely a threat to the flight safety. Especially in busy airports as he gave a reaction from his work context saying "thank God there was not traffic" and this also is one of behaviours that native speakers should avoid.

Question 8: Awareness and mastery of ICAO phraseology

Since our respondents are operational for the moment, both of them are aware of the ICAO phraseology and they master it well. They acquired the subject on their training (practical part). The ATC mentioned that the programmes they had was very strict, mistakes were forbidden and severely punishable. Thus, he follows; there should be a "punishment" for native speakers who deviate from phraseology to plain English when not required.

Question 9: Formulaicity in native speech

After we explained the notion of formulaicity to our respondents; and provided examples from both general and aviation English. They divulged that this was difficult to understand, since the investigator asked them to explain some of the expressions like (we are on the same wavelength, cut to the chase "general English") and (push the envelope "meaning: try something to the limits" and mind numbing "aviation English). Our respondents confirmed our doubts concerning this matter when both of them stated that sometimes they encounter difficult expressions like these, and that these misunderstandings may lead to breakdown of communication that is very risky in aviation giving the limited time of speech on radiotelephony.

Question 10: The ICAO language requirements and the necessity of reaching fluency

Both our respondents believe that fluency has become a necessity and a requirement for aviation operations and successful message transfer via radiotelephony. They believe that the ICAO phraseology is not enough and novice pilots and ATCs should have a good control over general English as well.

The ATC offered his perspective concerning the native speech where he argued that natives should be asked to avoid deviating from phraseology on routine situations at least because even "silly mistakes" may lead to catastrophes. He added that their jobs comes with great responsibility and mistakes like these are forbidden; thus, human mistakes should be eliminated because technical ones may occur and we have to keep minimal risk at all times.

The researcher pointed out repeatedly the effect of breakdown of communication and lack of English language mastery on the flight safety, our respondents mentioned this as well through what they called "language needed for non-routine situations" where aviation phraseology is never enough.

Question 11: Critical situations caused by breakdown of communication or misunderstanding

As far as our respondents' personal experiences are concerned, the pilot admitted that he was a part of few incidents none of them were critical. However, two of them related to language. He described them as "minor critical situations" but they were well controlled and no damage was resulted. As for the ATC, he said that he has been in one incident related to misunderstanding with a Turkish Airlines pilot. The cause was the expression "go ahead" that the pilot did not understand in relation to the aviation context. This expression is formulaic because of its nature and function.

In aviation, ATCs for example use this expression to give the chance to the pilot to deliver his/her message on the radio; however, in this situation, the pilot understood the sequence as move to the next flight phase. The ATC explained the situation to be harmless because of the calm traffic in Batna Airport, but if it was for a busy aerodrome, that might cause a problem.

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Question 12: Suggestions and recommendations

According to their experience, both of them were able to provide many recommendations related to English for novice pilots and aeronautics' professionals in general. The pilot had more information and suggestions because of his many years in service. As for studies and training programmes, the respondent suggested the use of English in specialty subjects in addition to ESP course. After, English must be the means of communication for the practical programmes well (simulations and flights). The pilot went further and recommended the use of English rather than French on national flights to get familiar with it before get a promotion to the international field. Even though writing and reading are not a priority in aviation, he emphasised on the use of English for airplane documentations and official reports since the latter, for example, which indicate the nationality of the airplane are always in English.

On the other hand, and unlike the pilot's statement, the ATC focused more on fluency and its effect on flights' safety. He stated that fluency is highly recommended in many situations where breakdown of communication is prohibited. For example, weather instructions require much detailed information and suggested solutions for the pilot. The latter necessitates the use of plain English since aviation phraseology does not cover this matter entirely. Another example of situations that we cannot find on phraseology instructions are medical incidents for passengers or pilots. According to the ATC, the two cases he provided are dealt with successfully only through the mastery of plain English, stated as fluency on the ICAO language requirements.

4.4.3.3 Summary of the Results

The operational professionals interviewed provided more detailed and yet accurate information on the use of English in aviation because of their vast experience in the field of aeronautics, and also the link they could draw between the use of English as novice pilots while studying and flying on the practical part, and the use of this language as professionals. The data analysed in this section revealed interesting results on the use of English in aviation between the strict phraseology and plain English. Also, and as far as the research topic is concerned, the necessary

use of plain English that requires a certain level of fluency provides a considerable assistance for the professionals especially on non-routine situations. This fluency, in addition to accuracy, are the main components of communicative/conversational competence that the researcher seeks to elaborate and enhance in this research through formulaicity.

The English language in aviation shifted from being a preference to obligation because of its status as a lingua franca. Non-native speakers of English who belong to this lane of occupation still find difficulties in ensuring a smooth and a flawless radiotelephony communication. Our respondents relate this phenomenon to the overuse of plain English by native speakers, formulaic sequences included. Both respondents have elaborated the latter very well. The ATC stated that sometimes, native pilots use difficult expressions that they mean something else. In relation to this definition, the pilot explained that in addition to aviation phraseology, Americans introduced many formulaic sequences in aeronautics after the Second World War. "Acknowledge + the plane name" "will do" "will co" were some of the first formulaic sequences used in aviation.

Apart from the misunderstanding caused by formulaicity, pronunciation, vocabulary, or pace of speech; our respondents provided a set of recommendations for novice pilots to avoid any of the hurdles they have faced throughout their careers so far. On one hand, the pilot focused more on the use of English during the novice pilots' educational/instructional careers in both theoretical and practical parts. On the other hand, the ATC insisted on reaching fluency, to a certain degree, as soon as possible, to have a good control over any radiotelephony communication/situation one may encounter, and to maximally minimise the human factors causing incidents and concentrate on technical ones.

4.4.4 ESP Teacher Interview

The investigator conducts this enquiry for ESP teacher since she is the first accountable for the English language instruction on both general and aviation parts. Through this interview, the researcher intends to collect data for the teacher's

educational and professional profile; also, her perspective on teaching ESP and the efficiency of the instructional process.

On the second part, the interview seeks to unveil all the details concerning the teaching/learning context and procedures alongside the status of English as a language and ESP session to academy's policy according to the teacher. Finally, the investigator introduces formulaic language and conversational competence for the instructor and asks for her standpoint on the occurrence, implementation, and finally the results expected in accordance to formulaic sequences and aviation (ICAO language requirements).

The following sequences describe the main content of the semi-structured interview (29 questions): (the researcher had to modify and edit some of the questions and add others after conducting the interview for the first time "piloting". The latter was a result of his limited knowledge of aeronautics in general).

Sequence one: Informative questions;

Sequence two: ESP course at Aures Aviation Academy;

Sequence three: Detailed information on ESP course;

Sequence four: Aviation English;

Sequence five: Students' lacks, necessities, and wants;

Sequence six: Formulaic language, ESP, and Aviation;

Sequence seven: Suggestions and recommendations.

The following part dictates the analysis of the questions included in the interview, important and helpful data were resulted.

Question 1 to 3: Informant's educational/professional background and qualifications

Our informant was the only ESP instructor in Aures Aviation Academy. She holds a licence degree in English. She has been working in the academy for nine years. As for her professional background, she has worked as teacher and an administrator for the ministry of finance alongside teaching English is several private schools. The instructor did not have any kind of ESP training.

Questions 3 to 6: the status and the introduction of ESP course at Aures
Aviation Academy

According to ESP teacher, her course and the other thirteen modules taught at the academy have the same status for her and the administration. Nevertheless, specialty modules instructors and students seem to put English on a secondary status. She has stated that the teaching process seems to work properly. The teacher elaborated more by stating that the instructional procedure of English on the theoretical part of the training (nine months) has two parts: general and aviation English. Students go through a syllabus based on the "New Interchange" series 1-4 divided into eight chapters. Students sit for achievement tests after each chapter; thus, each single student should have level eight in general English to move to aviation English programme based on "McMillan Aviation English".

Questions 7 to 12: teaching context (materials), duration, and content

ESP teacher was satisfied with the teaching learning context and comfortable educational environment. As well as the duration allocated to the course, that is thirty hours per level (8 levels) before introducing Aviation English. The investigator asked ESP teacher if she had conducted any needs analysis process to identify students' needs, the answer was negative since she stated that she just adopted the programme directly as it is and according to her previous teaching experience. The respondent uses several teaching materials, worth mentioning the data-show, recordings (of aeronautical communications), and authentic documents. The academy provides most of the teaching equipment within the classrooms.

Questions 13 to 15: teaching methods and techniques adopted

The interviewee focuses more on the communicative approach as she believes is the most suitable teaching method for aviation students. The respondent claimed that she uses activities adopted from the "new interchange" series because they assess students' language performance adequately and fulfil her course objectives. The latter are not mentioned at the beginning of the session; however, one of the techniques applied by the teacher is introducing the session's content using hints and brief oral

activities/inquiries. The first part of the programme (general English), does not contain any kind of technicality, it focuses mostly on grammar.

Questions 16 to 19: students' attitude and proficiency level

Even if some learners do not show any positive attitude towards ESP sessions, the teacher stated that most of them are eager to learn as much as they can of the English language. This positive attitude comes as a result of the importance of the language for global aviation. In addition, students must pass an English language proficiency test (certified) before becoming operational (EALTS level 4- see table 1.1 and6.5.2) and launch their professional careers. According to our interviewee, just few students show steady progress in their studies and some just want to learn aviation terminology. This is a result of the secondary status given by learners to English in comparison to specialty modules, different educational background of the subject, and limited effort and practice outside of the classroom. Finally, she believes that technicality is never enough for a pilot or an ATC since they desperately need plain English particularly on non-routine situations.

Question 20 and 21: English within the field of aviation

The investigator has elaborated the importance of English in aeronautics and stated the standpoints of other respondents. ESP teacher had the same perspective on the matter as her co-workers. She focused, in her responses, more on the importance of listening and speaking to avoid any breakdown of communication. Furthermore, in her answer on the question related to the collaboration with subject socialists to promote the status of the English language, and to propose the idea of teaching all modules using English, she showed her willingness for corporation and added that it would be interesting and beneficial for the sake of novice pilots' future careers.

Question 22: Students' necessities, lacks, and wants

In aviation, the last element stated above which is wants, is framed by our respondent in speaking. She believed that speaking is what novice aeronautics professionals; specifically, pilots and ATCs want most. They are keen to reach

fluency where their speech is quite accurate and concise at the same time. Additionally, she stated that listening is important for them mainly to avoid any hurdles related to pronunciation and accents.

Students' lacks, she added, are in close relation to vocabulary accuracy and grammatical correctness. Moreover, pronunciation, she adds is slightly neglected even if it is one of the yardsticks of radiotelephony (listening and speaking). Finally, she believes, as the researcher mentioned before, that the ICAO language requirements elaborate well their main necessities (see 1.5.3). These needs are chiefly designed for the success of radiotelephony communications, i.e. delivering and receiving messages effectively to avoid breakdown of communication, and to reach fluency (according the ICAO holistic descriptors-see table 1.1) in order to well control the language (plain English) on non-routine situations "incidents and accidents".

Question 23 to 26: the occurrence of formulaic sequences on ESP session

The respondent was not familiar with all parts of formulaic language, or with what we can or cannot consider as formulaic. However, and after discussing the subject with the investigator, he came to realise that the occurrence of formulaic sequences in her course was limited. She said that the reason behind this situation is that students find these sequences difficult to understand and she focuses more on simple English. Nevertheless, she uses some expressions, mainly phrasal verbs, collocations, and rarely idioms, so they can acquire the concept of the meaning behind the words (no literal translation). On our question concerning the implementation of formulaicity to ESP course, she said that it is a bit difficult at the beginning but beneficial for reaching fluency, only if accurately learnt i.e. the right sequence on the right context.

Questions 27 to 29: the implementation of formulaicity into ESP course

According to her previous answers, ESP teacher believes that the implementation of formulaicity would be beneficial to students' fluency and communicative competence. However, she argued that the successfulness of this

process depends on the accuracy of the sequences produced by the learners; thus, the teaching procedure should be methodical and well prepared. Finally, she trusts that the effect of formulaic language on novice pilots' and ATCs' would be positive on their language performance; precisely, on the speaking part of their official proficiency test and their future careers as well.

Question 30: suggestions and recommendations

She believes that all instructors must reinforce and focus on English more in teaching specialty subjects in parallel with ESP course. Furthermore, and by following the ICAO language requirements, ESP teacher was not worried about the training duration or content; however, she assured that the accuracy of learners' utterances in vocabulary and grammar (formulaicity included) is strengthened with more practice that leads to smooth speech and fluency. The latter, are the major components of communicative/conversational competence that guarantees the safety of any flight.

4.4.3.4 Summary of the Results

The educational context including the teaching/learning setting, instruction materials, and the syllabus adapted all seemed reliable for a successful educational career for novice pilots. However, the students still have conversational deficiencies that we cannot let go unnoticed because of their crucial negative effect on flights' safety. The language issues faced by students were generalised within the scope of conversational competence. Both grammar and vocabulary accuracy represent a difficulty for our students to fulfil their communicational professional needs.

The results obtained from this inquiry also revealed that the collaboration between ESP teacher and the subject specialists is necessary now more than ever to guarantee a better students' achievement on tests and in their careers afterwards. This suggested alliance depend on including the English language as a means of teaching specialty subjects to increase the amount of language practice for both aviation and plain English. Finally, ESP teacher deems that the collaboration mentioned earlier may help reconsider the status of the English language within the field of aeronautics

generally in Algeria, as well as enhance students' motivation to learn more of the English language, especially plain English, which is highly required in their field.

4.4.5 Classroom Observation Results

In addition to the other data collection instruments used before, classroom observation helped the researcher learn more about the teaching/learning process and content in relation to the ICAO language requirements and needs analysis outcomes so far through direct information from the natural language environment.

The investigator attended a total number of eight sessions. Five of them were regular courses taken at the institution main centre in Batna, and the other three took place as excessive courses within two days to prepare pilots (operational pilots for Tassili Airlines Company) for their English language proficiency tests. The sessions observed were far apart and not regularly set because of some consequences out of the investigator's reach.

- **The Teaching/Learning Setting/Context**

Similar to what ESP teacher stated, the investigator found a comfortable well-organised and equipped classroom. The academy guarantees a suitable learning environment for its students and a helpful setting for ESP teacher.

- **Students' and Teacher's Attitude Towards ESP Course**

Most of the students were motivated to learn English because of many reasons mentioned before, mostly professional. The operational pilots who took sessions before passing the language proficiency test were more motivated and eager to learn more. However, some of the students who belong to the academy (theoretical part) were less motivated and did not show any interest at the beginning or during the session. The latter might be a result of the secondary status assigned to ESP session by subject specialists and students themselves.

Additionally, the academy plans the course as the last during the day, after specialty sessions; thus, students might be tired, bored, and less excited about ESP course. Finally, there was no problem with attendance (except urgent cases) as

students' accommodation was in the same building and the academy had strict rules on the matter.

- **Teaching Approach and Techniques**

Generally, ESP teacher began her session with recapitulating the previous session's content (topic) as a warm up technique. She began the session's topic with questioning, individually, the students on the subject as an introduction technique. During the session, the teacher used French to elaborate vague notions or difficult terminology. The teacher did not state the course's objectives on any lesson phase. Above all, she maintained that she relies on the communicative approach for her courses according to her responses (ESP teacher interview). Yet, the teacher delivered the courses attended by the investigator through a mere teacher-centred method and lacked communication apart from directed questions.

- **Course Content**

The investigator collected considerable data concerning the content of ESP course from ESP teacher interview. However, he assembled reliable and truthful insights on the teaching/learning content and practices through observation. The lessons provided during the first part of the practice were only on general English and no technicality was involved. The second part discussed to aviation English (see 4.4.4).

The observer noticed the excessive use of grammar rules, activities, and practices during most of the sessions attended. Thus, what the researcher observed was not confirming the teacher's statements within the interview when she stated that she adopts the communicative approach in her teaching procedure. The teacher tries to avoid the use of the blackboard to keep the communicative nature of her sessions, but she uses it in most cases of misunderstanding or activities. Apart from grammar, the teacher, sometimes, introduces lessons on vocabulary and pronunciation as well according to their essential significance to aviation speech.

Students seemed to be bored and not interested in the subject studied in few occasions but the researcher thought it might be because of the course timing and status, in addition to the grammar based course content.

- **The Occurrence and Teachability of Formulaicity in ESP Course**

According to what was observed by the researcher, the occurrence of formulaic sequences was few and far between. The teacher used some types of formulaic chunks like idioms rarely and phrasal verbs more often. However, the number of these formulae was insufficient. The teacher argued this deficiency by stating that those formulae were difficult for students to understand and their level does not allow them to acquire these sequences. On the other hand, she believed that she avoids these sequences even when they reach a better level for no reason even if she stated that they could help students reach fluency.

As there was rare occurrence of prefabricated chunks, their teachability is out of question. However, the number of phrasal verbs the observer noticed, and that were not understood by the learners, were explained in several ways by the teacher; for example, by implying them in sentences, and mostly by using French to elaborate the accurate meaning of the sequence.

The perception of those sequences by students was not always successfully realised because of the ambiguity of the formula or failing to understand its contextual meaning. The use of phrasal verbs for instance by the learners was rare; though, the researcher noticed two students who used phrasal verbs, and the same two students seemed to be higher achievers than the rest since they seemed fluent and very confident of their language.

- **Classroom Work and Interaction**

ESP teacher believes in using the communicative approach for a better classroom communication, and shifts the focus on student and act like a guide rather than just a resourceful authority. This was not the case during the observation process; the course seemed to be more teacher-centred. The students spoke only when spoken to and rarely ask for clarifications. The spontaneous interaction with the teacher or with their peers was not frequent as required, most of the assigned work was intended to be individual work; thus, pair and group work did not occur often. The courses

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provided for the operational pilots for the proficiency test were more interactive, and these test candidates seemed more vigorous.

- **Teaching Materials**

The academy provided most of the modern teaching materials, the teacher mostly used hand-outs for exercises, some adopted and others developed. The use of audio-visuals also took place because of its immense importance to develop the two most important skills in aviation, listening and speaking. The instructor depends on authentic materials as well such as videos, audio recordings, or a written material. The investigator noticed the occurrence of formulaic sequences on these input resources more than the ones adapted, adopted, or developed by the teacher since they are or they include native speech/language.

- **Language Skills**

Even though ESP teacher well recognised that the two most important language skills in aviation are listening and speaking, the researcher did not observe much interaction or communication to develop those two skills from a practical perspective, since the theory was well presented through grammar-based courses in addition to vocabulary and pronunciation. This might cause a hurdle for novice pilots and ATCs first on their language proficiency test, and further on their future careers. On the same matter, and as far as formulaicity is concerned; the use of these formulae while practicing the language gives the learner more confidence and enjoyment, more details are mentioned on the following chapter (Recommendations and academic insights).

4.5 General Summary of the Main Results

In this section, the researcher seeks to summarise the results obtained from different inquiries conducted, then discuss the different items in relation our respondents' reactions. This will include the most important and yet related outcomes to our research objectives. The status of English within the field of aeronautics in

addition to the relation of formulaicity to needs identification, ESP course, and ICAO language requirements are the most important items discussed in this section.

In Algeria, the English language is a foreign language according to many historical, social, political, and economical factors. This status would be understood because of the mentioned factors and the choices made by people themselves. However, in aviation, the ICAO has stated a requirement regarding the language used in aviation (English), and obliged aeronautics' professionals to reach fluency.

Both professionals' interviews assured as the pilot has stated that English was a preference but now it is an obligation. Nonetheless, the status of English in aviation is seemingly related to the general view for the language in this country. According to subject specialists and professionals, it would be acceptable enough to use English to teach specialty subjects as proposed by the researcher. ESP teacher supported the idea even if she has shown a kind of difficulty to face with the application of the idea.

In Aures Aviation Academy, English has been a part of their training programme since they began in 2001. However, and after the data collection methods applied by the researcher in this institution, he noticed the secondary status given to the English language in comparison to specialty subjects by the instructors or students themselves. In addition, the timing of ESP course (the daily last course) was a sign and a proof of the inferior status assigned to English.

The importance of English in aviation is summarised by the language requirement stated by the ICAO for novice pilots and ATCs to reach fluency in this language. English is the language for in international flights communications through radiotelephony (lingua franca). Moreover, the fluency requirement comes as a result of the increasing use of deviating from regular phraseology and using plain English by native speakers, and its necessity in non-routine situations as our aviation professionals added.

They also believe that English must occur during radiotelephony on national flight communications to get familiar with the use of English in a less stressful and a calmer traffic before being promoted to the international field where the situations are more difficult and language errors are forbidden.

This voice-only aviation means of communication consists of both aviation phraseology and plain English, and it is the basic means of communication in aviation. The first is a limited and strict set of codes; the second is between the first and natural language (see 1.4.1). Aviation professionals who are non-native speakers are well aware of the ICAO linguistic requirements and yet communicative difficulties occur. There have been different studies, which analyse the types and nature of these difficulties. Some accuse native speakers to be too natural and neglect the use of phraseology is routine situations, which causes problems for non-proficient non-native speakers, while other studies arraign the latter for excessive attachment to phraseology and having problems understanding direct instructions using phraseology even. Moreover, therein lays the problem. Thus, hypothesis one is confirmed.

According to the outcomes reviewed from different respondents, ESP session's content was acceptable. On the other hand, some of the data provided by students and ESP teacher were not quite satisfying for the researcher; thus, the observation process conducted. It helped us realise a number of inadequacies concerning the teaching process and timing. Both of them had negative effects on students' language performance. The lack of interaction, teacher-centred approach, and the grammatical nature of the course gave less chance to students to practice what they have learnt. Also, scheduling ESP course at the end of the day (last session), within all the training programme cannot be beneficial for students seeing that they feel tired and bored after studying two or three sessions before.

Even though ESP teacher has a fine teaching experience, she has never had any kind of ESP training (education) or practice. The investigator was able to conduct a productive and a rich needs analysis process, as we were able to pinpoint the following:

- Most of our respondents believe that listening and speaking are the most necessary language skills for aviation and reaching fluency is inevitable according to the ICAO language requirements which endorses the confirmation of hypothesis one.

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- Subject specialists (instructors and professionals) believe that aeronautics professionals should use English instead of French for national radiotelephony communications. Moreover, they are not against the idea of using English as a means of instruction in collaboration with ESP teacher.

- The investigator adapted the respondents' answers to the ICAO language requirements to identify the necessities of the learners. The organisation obliges novice pilots to reach fluency, while ESP session focuses more on accuracy (grammar and vocabulary). Both are the components of communicative competence that we seek to develop using more practice of what students learn with implementing formulaicity, which develops students' pragmatic ability, and decoding situation-bound utterances to avoid any kind of breakdown of communication. Therefore, hypothesis four is confirmed.

- Relying on ESP teacher responses and using the outcomes from the observation process as a backup, we came to realise that grammar and vocabulary accuracy in addition to pronunciation are mostly the students' lacks for a better job performance. This of course, as the main component of their sessions needs to be practiced more to be able to speak fluently; then, to fill those pauses and fillers that are prohibited on radiotelephony, the investigator proposes formulaic sequences that help the speaker's smooth and short talk to deliver the message; the latter is very stipulated in aeronautics' communications. Thus, hypothesis two is confirmed.

- Regarding the students' wants, it is noticeable that they wanted to learn aviation English; however, most of them realise the importance of fluent speech for their future occupation even if they did not state it word by word.

- Apart from the target needs, the researcher observed a number of methods and practices applied by ESP teacher, the latter, according to the outcomes, can be modified to meet students' learning needs for better results. The teacher acknowledged the use of the communicative approach; yet, our observation process revealed less interaction that we strongly recommend as a follow up of the teachers' focus on grammar and vocabulary accuracy. The researcher noticed the absence of pair work, group work, and interactive activities,

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especially where native speech takes place. In addition, we became aware that the rare assignments or homework did not meet the language needs of students.

- As far as the ICAO linguistic requirements are concerned, in addition to students' necessities outcomes, it is imperative to know that aeronautics professionals, i.e. pilots and air traffic controllers involved in international flights using or will be using aviation English, are not concerned with learning all types of formulaic sequences. The latter as this research aims at, improves learners' conversational competence and helps develop their fluency to better deal with non-routine situations communication. Learners will not need types of prefabricated chunks of language such as proverbs that do not have any relation with their job's language requirements. Accordingly, hypothesis three is confirmed.

- Finally, and as far as the research questions are concerned, the researcher found out that radiotelephony is the main means of communication in aviation talk. Furthermore, and in relation to the occurrence of formulaic sequences in aviation speech, the researcher has noticed the occasional occurrence of formulaic sequences within ESP course but without being taught or explained. On the other hand, the research results indicate a limited number of formulaic sequences needed by aeronautics professionals such as idiomatic expressions, collocations and phrasal verbs. Lastly, formulaic sequences in accordance to aviation talk and its requirements, they can save time and effort in addition they help pilots and air traffic controllers avoid any breakdown of communication and jeopardise the flights' safety by acquiring formulaic sequences to develop their listening comprehension and conversational competence in general.

To sum up, all the participants believe in the benefits of the language practicality for novice pilots and ATCs. The ICAO language requirements generalised in fluency is what specialists recommended in addition to ESP teacher's focus on accuracy. The practice of language on national flights as advised by professionals should be a follow up of an interactive nature of language applied within ESP course to meet the requirements of the ICAO. This would develop the

two most important language skills as all the participants agreed upon, and avoid breakdown of communication for safer flights.

4.6 Conclusion

This chapter dealt mainly with the analysis of the data gathered from different participants using several data collection methods. Through this procedure, we attempted to gather and analyse the respondents' answers for identifying the students' target needs throughout their standpoints (questionnaire) and the professionals' recommendations and views (interview). The learning needs as a second cornerstone of the needs analysis practice were identified depending on ESP course instructor teachi ng perspectives (interview), in addition to the subject specialists' and administrators' beliefs and experiences (questionnaire). Finally, the researcher relied on his personal observation to consider the teaching/learning environment and approaches/techniques used to deliver the course's content.

The outcomes reveal a growing interest in using English as a means of instruction for specialty subjects. Administrators, students, instructors, and professionals are well aware of the importance of English and its mastery for international aviation. Subject specialists were with the idea of collaborating with ESP teacher to use English for instruction, as they believe it would be for the students' and the Algerian aviation benefit.

The researcher's needs analysis process provided significant data to apply some modifications on the syllabus to enrich the content, strengthen the weaknesses of language practice, develop the use of teaching equipment/materials, and finally come up with a syllabus that can meet the ICAO language requirements.

CHAPTER FIVE: Course Adaptation and Design

CHAPTER FIVE : Course Adaptation and Design

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5.1 Introduction

This chapter introduces and attempt of designing a course for aviation professionals (pilots and air traffic controllers), the course meets our students' target needs in terms of language requirements within the work place environment, and their learning needs to meet language and skill deficiencies and increase their language performance and ultimately avoid any radiotelephony misunderstanding or breakdown of communication.

The researcher outlines a set of lessons focusing on listening and speaking as language skills, and implementing formulaic sequences as an additional part of language that helps learners sound more linguistically proficient and fluent; thus, endorse their motivation and attitude towards the English language and improve their conversational competence.

The choice the researcher has made of implementing formulaic sequences comes from the following. First, the importance of formulaic sequences in developing accurate comprehension and fluent speech according to several analysed data and perspectives he got from former researchers on the subject matter; and second, the ICAO linguistic requirements that encourage developing the pragmatic skill and fluent speech more importantly in non-routine situations where plain language use is needed.

Focusing on pilots and air traffic controllers does not limit the scope of our findings and designed lessons to this specific sample population since all of aviation professionals have similar linguistic requirements set by the ICAO for their international operations. In addition, they have the same language lacks, necessities and wants.

The researcher opts for using different outcomes from a set of data collection methods. The researcher reflects the analysis of the gathered data on the course design through a set of objectives and sub-objectives for each single unit. The purpose is, on one hand, to meet our novice aviation students' language necessities and reinforce their lacks; and on the other, to take advantage of formulaic language as a major factor affecting foreign language learners' conversational competence and language

production fluency that is required by the ICAO linguistic standards. The researcher deals with both aspects interchangeably within the courses we will design and they are in tight link to one another.

Thus, this chapter discusses, practically speaking, the use of the extracted students' needs into syllabus objectives. On the same train of thought, the researcher elaborates and justifies the selection of the designed syllabus then the structure of the syllabus and teaching units. Finally, he introduces different teaching techniques and followed procedures used to present the designed syllabus.

5.2 Before Syllabus Design

ESP course design is a set of organised steps that aims at designing a syllabus to meet learners needs required within the target situation. In this section, the researcher discusses the important steps that need to be followed to reach the mentioned aim starting by needs identification and analysis.

5.2.1 Needs Analysis

Due to the nature of ESP course, as a learner-focused, learner's need oriented, and target situation communicative subjects directed, needs analysis is the cornerstone of ESP syllabus design according to Hutchinson and Waters (1987) and Dudley-Evans and St. John (1998). Based on the data analysed, most notably ESP teacher semi-structured interview results, there was no needs analysis procedure followed by the teacher. She relied on her experience to choose the course methodology and content in order to meet the ICAO linguistic requirements for aviation operations communicative procedures.

5.2.2 Summary of Students Needs

The continuity of the process allows the teacher to ensure better outcomes by updating the course content and methodology and adapt the materials to what students need in their target situation, and reinforce their linguistic lacks (target needs). Additionally, the researcher endorses this process as it helps the teacher gain students'

interest and make sure they are motivated enough to go through the whole programme(learning needs).

According to the ICAO, aviation English is mainly concerned with sending and receiving accurate information in limited periods of time. Aeronautics professionals need to develop their listening comprehension and speech fluency in order to be operational. The target situation; in other words, radiotelephony communication depends on accurate information transfer during day-to-day communications. However, non-routine situations such as incidents or unusual circumstances necessitate the use of plain English, which comes between basic aviation phraseology and natural English.

In order to reach fluency, especially in non-routine situations, novice pilots and air traffic controllers need first to develop their listening comprehension. Since plain English is the language needed in these situations, formulaic sequences occur more often especially by native speakers. The researcher focuses on the comprehension and acquisition of such prefabricated chunks of language that hold a figurative nature. As for vocabulary, the ICAO advises aeronautics students and operational professionals to be as consistent and accurate as possible. Idiomaticity is key to have a fluent speech and the ICAO considers it as an important element of language for pilots and ATCs to be operational.

Grammar is an important holistic descriptor as described by the ICAO. However, students need to master basic grammatical structures without forgetting about complex structures as they are recommended as well. Finally, fluency and interaction are crucial to the success of radiotelephony communications. The former is related to speaking with ease on common, concrete and work related topics. While the latter requires instant responses without many hesitations as the target situation is characterised by short speech allocated time and specific language functions such as confirming and clarifying.

5.2.2.1 Learning Needs

ESP session is compulsory; however, it has an optional status. To clarify, ESP course is in the end of the day (schedule), for two hours from 6:00 – 8:00 pm, and the

session is not on the timetable (see appendix 10). Thus, the session is a secondary subject. The researcher encourages ESP teacher to consult the administration in order to reschedule the session since at that time (6-8 pm) students will be already tired and unmotivated to go through another session; to be fair, it is worth noting that ESP teacher rescheduled some sessions for morning sessions but only temporarily.

During the observation phase, the researcher noticed that students are not motivated and only few show interest in the teaching content and methodology. Thus, the researcher suggests more interactive tasks and differentiating the nature of the activities to attract their attention and help them feel involved. Apart from these points, the surrounding (physical context) is pleasant, comfortable, neat, and encourages a successful teaching/learning process.

5.2.2.2 Target Needs

The NIA offered interesting data that may help the researcher enhance novice pilots' and ATCs' communicative competence. Aeronautics' professionals communicate through a single channel (radiotelephony), and it is a voice only means of communication and this means that the paralinguistic features of language are not an option. The issue at hand in the excessive use of plain English by native speakers and proficient non-native speakers of English on radiotelephony and that includes routine situations. The researcher suggests the use of formulaic sequences by implementing them in every course to help students reach communicative competence and avoid any breakdown of communication.

i. Necessities

This specific kind of needs delineates the target situation requirements. In addition, shows what learners should know to operate effectively in any common, concrete and work related topics at work (on board). Novice pilots and ATCs need to communicate effectively and avoid any possible breakdown of communication. More specifically, students must have a good control over aviation terminology and language functions. Additionally, it is essential for them to have interactional skills and be able to respond appropriately when unusual circumstances occur. Basic

grammatical structures and a pronunciation (accent) that does not affect the meaning should not be of concern for students; however, accurate comprehension and fluent speech is highly required in aviation talk and this is what the researcher focuses on more by implementing formulaic sequences.

ii. Lacks

At this point, students are mostly able to provide short stretches of language with basic grammatical structures. This is satisfactory as far as the ICAO linguistic requirements are concerned. However, plain English consists of longer stretches of speech that our students will be exposed to especially from native speakers; that is to say, native speech consists of a large number of formulaic sequences with different levels of idiomaticity. As a result, the teacher encourages the acquisition of these formulae to overcome any misunderstanding that the students would face while listening, and promote the use of prefabs to enhance their speech quality and fluency.

According to needs identification and analysis, students find difficulties in both comprehension and identification of formulaic sequences. Additionally, the target situation, and as far as plain English use in non-routine situations and the ICAO linguistic requirements, the acquisition and use of prefabs can help students develop their pragmatic skills and ensure successful message dispatch and comprehension especially in non-routine situations (see 2.14).

iii. Wants

Learners realise the necessities of the target situations and can pinpoint their language lacks but there is always room for learners' perspective to diverge with the other stakeholders' perceptions on the matter such as the teacher, course designer, sponsors, or administrators. consequently, it is expected for learners' wants to match other stakeholders' perceptions as it is the subjective part of target needs analysis as stated by Rechterich (1984, p. 29) "... a need does not exist independent of a person. It is people who build their image of their needs on the basis of data relating to themselves and their environment". Students prefer to have good control on their language performance and production, both speaking or writing. Since the latter is

not called for in target situation requirements, the researcher focuses more on the oral production of language and providing clear and fluent speech.

5.3 The Use of Formulaicity within the Adapted Syllabus

Relying on the implementation of formulaic sequences in the adapted syllabus is the researcher's main concern. However, the implementation process must have an objective and a structured procedure. The researcher discusses in this section the occurrence of formulaicity in aviation English and the objective behind the intended implementation.

- **Phraseology and Plain English**

Second language acquisition and foreign language learning has mostly focused on grammatical accuracy and phonology as the core content and treated vocabulary as a marginal part of language. Bloomfield (1933) asserts "The lexicon is really an appendix of the grammar, a list of basic irregularities" (cited in Nguyen, 2014, p. 2). However, language lexical acquisition is receiving more interest as researchers find serious effect on language learning after it was influenced by behaviourist psychology and linguistic structuralism schools.

Wunderlick (2006) asserts this alteration on the late 1980s by stating that every single lexical item holds phonological, semantic and categorical assets; the lexicon is greatly structured; and the distributed information of the lexicon establishes the mechanisms of the components of grammar. Thus, he believes that, at that period, there was "a strong tendency towards favouring the lexicon as a structure-giving reservoir". (P. 2)

In ESP, and as far as EOP is concerned, language used is mostly technical and relies more on successful communication and fulfilling message deliveries. Thus, it is more important for language users here to ensure accurate selection of lexical items and stretches of speech for example, rather than to ensure producing complex grammatical formations.

In aviation, novice pilots and air traffic controllers are asked to master aviation phraseology for routine aeronautical communications and everyday operations

through radiotelephony. Phraseology, which should not be confused with the notion of phraseology discussed generally in linguistics, is a specific language design to fulfil specific communicative requirements, it covers common, concrete, and work related conversational situations within air traffic and navigation. In addition to the continuous update, it aims at guaranteeing effective communicative phases between pilots and controllers using simple lexical, syntactic, and semantic formations. According to ICAO (2010, 1.1.3) "the purpose of phraseologies is to provide clear, concise, unambiguous language to communicate messages of a routine nature".

The characteristics of phraseology are summed up by (Mell 1992; Philps 1989, 1991; Rubenbauer 2009) within the omnipresence of the imperative form in controllers' messages. Lopez et al. (2016) state:

> The rarity of the interrogative and negative forms, the almost complete absence of modals.The deletion of determiners, subject pronouns and prepositions; the deletion of auxiliaries *be* and *have* in be + past participle forms, be + -ing forms and have + past participle forms. The nominalisation of concepts; a highly specialised, univocal and finite lexicon.The use of an alphabet proper to the aeronautical domain; and finally the specific spelling and pronunciation of numbers. Thus, it is a set of highly specialised lexical items designed for specific communicative needs. (P.3)

Aviation phraseology characteristics actually match some of the characteristics of formulaic language, as highly fixed, situation bound, frequently used as chunks or with fillable slots, and holistically acquired and produced. This is not the main focus since phraseology, covers only a limited number of air navigation situations and it is highly specialised. However, it helps introducing the notion of formulaicity for our students for developing their communicative abilities within non-routine situations that require the use of plain English.

So, plain English, which is our main concern, is defined as "spontaneous, creative and non-coded language" (Lopez et al., 2016, p. 3). This part of language is found to not feature the clarity, concise, and precise nature of radiotelephony speech

in comparison to aviation phraseology. Nevertheless, it is needed for the simple reason that phraseology does not cover all air navigation circumstances; in other words, non-routine situations such as accidents and incidents, in addition to the deviation of native speakers and proficient non-native speakers from the use of basic phraseology even within routine situations.

As a result, the researcher believes in developing the conversation competence of NNS aeronautics' professionals (both operational and novice) through formulaic sequences as to be able to comprehend and produce stretches of speech faster considering the critical significance of time on radiotelephony, all for ensuring safer flights through the avoidance of communication breakdown.

5.4 The Teachability of Formulaic Sequences

The researcher seeks the implementation of formulaic sequences rather than teaching them separately. To clarify, he uses different parts of formulaic sequences, as far as they are concise and related to their work related topics. As an example, the use of phrasal verbs, collocations, and word formations that hold an idiomatic nature is highly recommended to develop students' pragmatic skills and accurate listening comprehension especially for native speech (Assassi and Benyelles, 2016).

Two pieces of evidence guided us to this implication; first, the semi-structured interview conducted with the operational air traffic controller resulted interesting data. He states that in different occasions, even if Batna Airport has not a busy air field; thus, plenty of time to react, the ATC faced problems understanding native speech and blamed them for deviating and using plain English even on routine situations that lead him to keep signalling "say again" to understand their requests. Second, higher levels holistic descriptors by the ICAO (level 4, 5, and 6) encourage the use of idiomaticity and formulaic speech "vocabulary, comprehension, fluency, and interaction" (see table 1.1).

The course design will not include formulaic sequences that are unrelated and useless to aeronautical communication such as proverbs. The researcher uses phrasal verbs, collocations for instance as implied parts in aviation speech or written materials to check their listening and reading comprehension without changing

entirely the nature or the course content. The researcher presents formulaic sequences either as an already existing part of the authentic material or be added by the designer without changing the objective of the activity.

The teacher in the next phase assesses their language production, comprehension, fluency, and interaction and notices formulaic sequences comprehension (recording) or the ones used and their effect on the smooth flow of the conversation.

5.5 The Structure of the Adapted Syllabus

Developing a framework for an ESP course is a challenging task; however, the process that researchers trail goes beyond the mere identification of learners' needs and the selection of materials for the teaching/learning procedure. In the following diagram, the researcher adapts Hutchinson and Waters' (1987) syllabus design process based on a learning-cantered approach. The researcher aims at developing students' conversational competence through the acquisition and use of formulaic sequences. Thus, it is advisable to rely on a learning-centred approach that treats students as both users and learners of the language rather than just providing materials based on target situation. According to Hutchinson and Waters (1987), the language-centred approach does not take into account learners' lacks, while the skills-centred approach provide learners only with practices to evaluate the skills needed within the target situation, and that contradicts with the research's main objectives.

To elaborate, the researcher adapts the learning-centred approach because we need learners' lacks to help them improve their communicative skills as target situation language requirements. In addition, unlike the skills-centred approach, this approach helps the learner deal with non-routine situations since they are not part of the main target situation, which in aviation is using phraseology on radiotelephony only. Moreover, this is the research's main objective since it opts for the acquisition and use of formulaic language that often occur in non-routine situations.

This section discusses the different steps to follow in order to develop an ESP syllabus as shown on the following diagram.

```
┌─────────────────┐                    ┌─────────────────┐
│ Analyse Learning│                    │  Analyse Target │
│    Situation    │                    │    Situation    │
└────────┬────────┘                    └────────┬────────┘
         │                                      │
         │                                      ▼
         │                             ┌─────────────────┐
         │                             │ Generating Aims │
         │                             │  and Objectives │
         │                             └────────┬────────┘
         │                                      │
         ▼                                      ▼
┌─────────────────┐              ┌──────────────────────────┐
│ Create and Select│             │    *Syllabus Content*    │
│   Interesting,  │◄────────────│                          │
│  Enjoyable, and │             │   Establish General      │
│   Challenging   │             │   Syllabus of Topics &   │
│    Materials    │             │         Tasks            │
└────────┬────────┘             │                          │
         │                      │    Produce Detailed      │
         │                      │    Language Skills &     │
         │                      │       Functions          │
         │                      └────────────┬─────────────┘
         ▼                                    │
┌──────────────────────────┐                 │
│    Course Evaluation     │◄────────────────┘
│                          │
│ Check Language and Skills│
│  Content of Materials    │
└────────────┬─────────────┘
             │
             ▼
    ┌─────────────────┐
    │ Make Necessary  │
    │    Changes      │
    └────────┬────────┘
             │
             ▼
    ┌─────────────────┐
    │  Finalise the   │
    │ Detailed Design │
    └─────────────────┘
```

Diagram 5.1: Development of ESP Syllabus (Adapted from Hutchinson and Waters'

Learning Centred Syllabus Approach, 1987)

The first step of the process consists of both analysing the target and the learning situation. The former discloses important information on learners' necessities based on the target situation requirements, their lacks that the researcher treats to fulfil the target linguistic requirements, and finally their wants as far as their linguistic preferences are concerned. The latter focuses more on providing data about the learning context, students' attitude, motivation and the physical context learners' use during their instructional courses. This type of data is primal for the syllabus design and instructional materials choice.

Second, the researcher sets the course aims and objectives after having a general idea on the path he is going to follow for this process. He uses the following statement to set general aims of each unit: "at the end of this unit students will be able to ..."

Creating interesting materials are in liaison to students' expectations and the physical context (the classroom). This step helps the researcher select and develop suitable materials to raise students' interest and motivation for learning and avoid boredom as the researcher has noticed during the observation phase of data collection. The type and diversity of materials in addition to a challenging atmosphere increases students' motivation and raises the quality of the learning situation and outcomes.

Next, establishing topics and tasks for the syllabus and producing accurate language skills and functions is a challenging task itself since it has direct influence on the quality of learning; thus, the fulfilment of the course objectives.

Finally, the evaluation phase comes to assess the situation. Moreover, what the research has reached so far in this process. Learner assessment is dealt with first to assure that students are able to well perform is a given communicative context/ situation. Additionally, the course evaluation is quite crucial for the whole process as it helps deciding the effectiveness of the teaching/learning procedure and meeting the objectives set at the beginning of the process.

- **The Objectives of the Adapted Syllabus**

    The following table presents an attempt to create an adapted syllabus based on Hutchinson and Waters' (1987) model of ESP course design procedure.

	Topic	Skills	Pronunciation	Functions	Vocabulary	
Introductory Unit						
	Introducing	Listening comprehension		Exploring formulaic sequences	Types of formulaic expressions	
	formulaic language	Formulaic sequences		to use for different functions	Formulaic sequences in aviation English	
		accurate production (speaking)				
Unit 1: Runway Incursion	1, Avoiding miscommunication	Reading and vocabulary		Asking for information	Communication	Proficiency Test
	2, Airport layout	Listening and speaking	ICAO alphabet		Prepositions	

	3, Ground operations	Listening and speaking	Numbers	Describing actions and position	Verbs describing actions and positions
	4, Language development				
Unit 2 : Lost	1, Across thePacific	Reading and vocabulary		Explanaing abbrevitions	Navigation
	2, Finding flight N45AC	Listening and speaking	Past tense endings		Co-ordinates
	3, Lost	Listening and speaking	Confirming and disconfirming		Topographical features
	4, Language Development				
Unit 3 : Technology	1, Datalink	Reading and vocabulary		Expressing purpose	Communications
	2, Flight Control System	Listening and speaking	/b/ and /p/	Saying things another way	Safety

	3, Instrument Blackout	Listening and speaking	Sentence stress 1	Giving instructions	The instrument panel	Proficiency Test
	4, Language development					
Unit 4 : Animals	1, Wildlife on the ground	Reading and vocabulary		Expressing necessity	Security measures	
	2, Animals on the loose	Listening and speaking	Word endings	Expressing preferences; Explaining unknown words	Cargo	
	3, Bird strike	Listening and speaking	Sentence stress 2	Saying instructions		
	4, Language development					
Unit 5: Gravity	1, Ultrlight	Reading and vocabulary		Explaining how something works	Manoeuvring an aircraft	
	2, Air race	Listening and speaking		Comparing and contrasting	Aerobatics; Units of measurement	

	3, Hydraulic loss	Listening and speaking	Tonic stress	Explaining difficulty and offering help	
	4, Language development				
Unit 6 : Health	1, Is there a doctor on board?	Reading and vocabulary		Expressing cause and effect	Medical emergencies
	2, Stressed?	Listening and speaking	Consonant clusters 1	Making suggestions and giving advice	Symptoms of stress
	3, Medical emergency	Listening and speaking	Intonation of lists	Giving and asking for updates	
	4, Language development				
Unit 7 : Fire	1, Fire risk	Reading and vocabulary		Obligations, prohibition and permission	Collocations related to fire
	2, Smoke-jumper	Listening and speaking		Orders and requests	Verbs for describing fire
	3, On-board fire	Listening and speaking	/l/ and /r/	Identifying and responding to problems	Electrical problems

	4, Language development					Proficiency Test
Unit 8 : Meteorology	1, Microburst	Reading and vocabulary		Changing the strength of adjectives		
	2, Airport disruption	Listening and speaking		Results and consequences, repeating information	Weather words	
	3, Stormy approach	Listening and speaking	/ʃ/, /ʒ/, /tʃ/, /dʒ/	Warnings		
	4, Language development					
Unit 9: Landings	1, Touchdown	Reading and vocabulary		Describing sensory impressions	Landing gear and braking	
	2, Letting down a VIP	Listening and speaking	Consonant clusters 2	Describing 3-D position and movement	Verbs of movement	
	3, Undercarriage	Listening and speaking		Resolving misunderstanding		

	4, Language development					
Unit 10 : Fuel	1, Avition and global warming	Reading and vocabulary		Suggesting solution to problems	Prefixes	Proficiency Test
	2, Gimli glider	Listening and speaking	Information groups		Fuel collocations	
	3, Fuel icing	Listening and speaking	Long and short vowel sounds	Expressing expectation		
	4, Language development					
Unit 11 : Pressure	1, Blast	Reading and vocabulary		Expressing time and duration	Action verbs	
	2, Damage	Listening and speaking	Diphthongs	Summarizing	Types of damage	
	3, Emergency descent	Listening and speaking	Contrastive stress	Expressing consequences		
	4, Language development					

Unit 12 : Security	1, Air rage	Reading and vocabulary		Focusing on actions	Conflict and restraints	
	2, Suspicious passengers	Listening and speaking	, -tion, -sion, -cion endings	Expressing possibility and probability	Strange behaviour	
	3, Unlawful interference	Listening and speaking	Information groups and stress	Reporting		
	4, Language development					

Table 5.1: The Adapted ESP Syllabus

The main objectives of the adapted syllabus are in relation to the ICAO language requirements. The adapted syllabus aims at focusing more on speaking and listening as required language skills for radiotelephony communication. The syllabus aims at developing oral language practice through pair work and using other teaching techniques such as dictogloss and shadowing, which help the teacher to expose learners to native speech more often.

The syllabus aims as well at putting less focus on grammar by adopting a combination of the lexical and communicative approaches to enhance the learner tackling time in the classroom and develop learners' interaction skills. Pronunciation has its fair share of this syllabus content since it is important for learners to avoid any confusing pronunciations on radiotelephony as they are going to speak with other pilots and ATCs with different linguistic backgrounds.

The syllabus aims at developing learners' pronunciation and have minimal interference of Arabic and French. Since it is our main concern in this study, formulaic language occurs more often in activities as it helps learners develop listening comprehension, fluency and interaction. The syllabus tackles, within a short term, i.e. first couple of lessons, the acquisition of the notion of formulaicity, its nature, and constituents. Later, and on a longer term, the syllabus aims at developing the use of these formulae in practices so that the learners be familiarised with formulaicity and develop their listening comprehension and fluency.

5.6 The Sample Units

Three sample units the researcher provides are the first, to provide information on formulaic language and give learners an idea about the notion of formulaicity. Then unit six and eleven entitled "health" and "fuel" which deal with common, concrete, and work related topic; at the same time, focuses on the use of formulae and its effect on learners' conversational competence (see table 5.1 and 5.5).

5.6.1 Structure of the Units

The adaptation applied by the researcher for the syllabus design marks out the importance of formulaic language for aviation future professionals' communicative competence and pragmatic skills. The first step taken is to make sure to highlight the general aim of the unit and elaborate the language functions the learners will be able to acquire and use at the end of the current unit. Additionally, this part consists of a brief elaboration of the language aspects the teacher will deal with through the different types of activities.

5.6.2 Pre-listening and Pre-reading Activities: (receptive skills)

In this part of the lesson, the teacher presents activities in the form of a warm up in order to help students realise the general topic of the unit and discuss different lexical items related to the unit's subject. The teacher presents the items in the form of a group discussion, commenting on pictured or video, and considering situations related to the main unit's topic. This part of the lesson aims also at creating a brainstorming phase that will lend a hand to students to walk into the session and feel involved. The teacher should make sure that all the students are on board and follow the prompts presented in this phase.

i. *Reading Comprehension*

As much as it is required to focus more on listening comprehension, reading comprehension should not be ignored in teaching aviation English as it helps learners

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maintain and practice of this language skill and do not lose interest especially for learners who are interested in reading. The teacher represents this part in the form of adapted or authentic texts. These textsare compatible to the topic at hand. The teacher gives students a chance to read for a limited amount of time. After that, the teacher opens discussion for comments and questions to learn the complexities students faced. Next, the teacher reads the text aloud to help students acquire the pronunciation and match it with the script and spelling.

Students go through the activities related to the text, either individually or in pairs. The teacher focuses on the comprehension of the main idea, meaning accuracy, and the use of lexical items rather than grammatical strictness, novelty, or structural complexity. Students need to control basic grammatical structures and sentence patterns only as they are required sometimes to read checklists and manuals. The activities can take several forms such as filling gaps, details read-back, text's gist, and true/false exercises.

Formulaic sequences have their fair share in reading, as students will deal with a number of formulae such as connectors that would have a positive influence on their fluency and conversational competence.

ii. Listening Comprehension

Listening comprehension is crucial for aviation professionals. Radiotelephony cannot be as clear as recordings played inside the classroom; thus, the teacher plays noisy and vague recordings from time to time to make students be familiar with these situations. Additionally, it is important for novice pilots and ATCs to learn how to check, confirm, and clarify any of the information or the details they miss which is decisive in radiotelephony, as we will discuss these functions next in this section.

The use of non-native talk and speech varieties is imperative to avoid breakdown of communication since our pilots and ATCs might confront such situations where they are the proficient interlocutors in the communication. Thus, discussing dialects, accents and registers is within the suggested syllabus.

Native speech presents a more beneficial listening episode for learners. They are open to more sequences that are formulaic and challenged to understand as many

details as possible. The listening activities consist of filling gaps, selecting missing details, word repetition, and completing sentences and dialogues.

Native speech consists of a large number of formulaic sequences. Relying on the analysed data, more accurately on the ATC interview, native speakers tend to deviate and use plain English even in routine situations where strict phraseology is necessary. Including formulaic sequences in scripts and recordings is more than needed to be able to assess learners' comprehension when these formulae occur, particularly when the degree of idiomaticity is higher in within. The study and understanding of these formulae in context is one of the points the researcher focuses on most through learners' identification of formulaic sequences and the interpretation of accurate meaning.

As far as pronunciation is concerned, it is important for pilots and ATCs to be familiar with different accents used by either native or non-native speakers of English. For this matter, the teacher uses different sets of recordings from time to time in order to help students overcome this issue, not to master every single accent, but only to be familiar with them in order to be able to face these situations in the target situation.

Ultimately, listening comprehension needs to be mostly accurate especially on common situations and work related topics. It is inevitable to face linguistic complications; however, taking control and managing the communication is highly required in both routine and non-routine situations.

5.6.3 Speaking, Fluency, and communicative Competence

In this syllabus, the researcher did not include writing as he cannot devote any activities related to writing because of the target situation linguistic requirements that consist of voice only communications. On the other hand, reaching fluency and avoiding breakdown of communication is of more importance. Following up the previous language skills, and what they aim to fulfil through a set of activities, speaking is mostly a pairs practice because of the nature of the target situation and communicative requirements. Students discuss challenging situations or issues in

aviation and share information and results they discover. The teacher makes sure the tasks are in close to the topic of the unit and assist students if necessary.

While students share their information and suggestions, the teacher pays attention to the use of learnt formulaic sequences and their effect on students' fluency and communicative competence. He also insists on using as many formulaic sequences as possible to help students' organise their speech and sound more proficient. What is important as well is the precise information transfer and details sharing.

Pronunciation presents a difficulty for novice pilots and ATCs especially for those who had their trainings in French speaking communities. Consequently, practicing accurate pronunciation such as word endings (final s / ed), short and long vowels, consonant clusters, and diphthongs can save valuable seconds in radiotelephony; and being familiar with these errors can also help learners when they are more proficient than the interlocutor on the other end of the communication. What is significant on this matter is not the perfect pronunciation or the influence of the mother tongue but rather the minimal interference with ease of understanding.

Teaching speaking for aeronautical purposes is a challenging task since teachers are supposed to focus on vocabulary accuracy and ensure that students are able to paraphrase when lacking exact lexical items in unexpected circumstance. Additionally, teachers need to encourage students to produce longer stretches of language and speaking with ease at an appropriate tempo. This is where formulaic sequences come into play, connectors and discourse markers as prefabs can help students maintain fluent and smooth speech and teachers here insist more on using learnt formulae.

Finally, teachers must support students to provide immediate and informative replies leaving minimal space for blank fillers such as silence or humming. Teachers here should provide limited response timing (ex: checking and clarifying details while exchanging information through voice only communication) this is applied in order to urge students to have successful communicative situations responding immediately and accurately besides having a good command over unexpected events and misunderstanding.

5.6.4 Post-production activities (a performance task)

At the end of each unit, the teacher provides a number of unusual circumstances in aviation that are the topic subject. Students have a limited time to develop their responses based on their knowledge. Then, each pair of students discusses and shares their responses. The teacher eventually asks students to read back what they came up with one by one while their classmates ask questions and comment on anything they find peculiar about how their colleague dealt with the emergency. The following is an example for more elaboration.

- **Scenario one**: You are flying from Algiers to Madrid; while on the climbing phase, you experience a total failure of engine one.

- **Scenario two**: you are flying from Paris to Tlemcen; while preparing for landing, you notice an unknown runway contamination.

Students are supposed to provide information about procedures to follow and different information to request and provide via radiotelephony with ATC, nearby aircrafts, and the company. The application of different communicative functions and the occurrence of formulaic sequences in addition to accurate information transfer is what the researcher mostly focuses on.

5.7 Language Functions

The communication in aviation is limited and restricted to radiotelephony; however, this restriction does not make it simple as pilots and ATCs are confronted with several communicative situations that are complex enough and are required to act immediately and accurately in a limited period of time (see 5.5). As a result, the ICAO linguistic requirements set the following functions are mostly important for aeronautics' professionals and are needed to be well controlled as Mell (1992) elaborates:

1- Triggering actions :(orders, requests and offers to act, advice, permission/approval, undertakings);

    2- sharing information: (present states/actions/events; future
        states/actions/events; immediate or recent past
        states/actions/events; past states/actions/events; necessity;
        feasibility/capacity);

    3- managing the pilot-controller relationship. (greetings, thanks,
        satisfaction/complaint, reprimand, concern/reassurance,
        apologies);

    4- managing the dialogue: (opening/closing, (self-) correction, read-
        back, acknowledgement, checking, repetition, (dis-) confirmation,
        clarification, relaying). (P.2)

On the other hand, there are a many formulaic sequences, which fulfil these communicative functions (see 2.7). Since talk occupation time is quite limited in radiotelephony and formulaic sequences endorse faster processing and shorter language chunks, teachers should encourage the use of such expressions.

5.8 The General Objectives of the Designed Units

The designed units aim at:

1- Topics: students acquire topics and terminology related to their area of expertise. Apart from the aviation phraseology, the teacher implements formulaic sequences related to each topic implicitly to assess their comprehension and the development of their conversational skills and competence. This will help them develop their fluent speech and avoid any breakdown of communication as far as the use of plain English is concerned.

2- Skills: Even though the researcher discusses repeatedly that, the focus will be on listening and speaking, reading and writing would not be totally ignored.

3- Less focus is on grammar as students are supposed to provide accurate data using specific terminology and they are less concerned with complex tenses. Thus, the researcher relies on a combination of the lexical and communicative approach in teaching (see 5.10).

4- Less reading, but more listening comprehension is on practice through answering questions, filling gaps, and deduction activities.

5- Activities related to memorising lexical items for each topic.

6- Developing students' speaking abilities and fluent speech through scenarios and challenges as we have seen above. Additionally, the use of pictures and videos provide a great deal of assistance for learners to discuss issues more precisely and concisely.

7- As pronunciation is important in radiotelephony because of the vague nature of audio quality, different types of activities that the researcher design and select to make sure students, would not fall victims of this issue and avoid any breakdown of communication or misunderstanding.

5.9 Topics and Materials Selection

There are several factors that we should take into account while selecting topics and materials to use for the teaching process. The source, appropriateness, usefulness, and content are the main aspect affecting the choice of any content to implement and use within ESP course. From another perspective, Hutchinson and Waters (1987, p. 61) comments on J.B. Herbolich's experience within a given ESP situation (engineering students) believes that there are five reasons to choose a certain mechanism to ensure a comfortable and progressing learning environment; accordingly, the mechanism should be:

1- Relatively new to the students;

2- Related the field of interest –engineering in his case-;

3- A device which allowed the attainment of new lexis;

4- A device which actually would operate;

5- And, enjoyable to construct and test.

As many materials as there are, it is important to note that we aim at implementing formulaic sequences and shedding light on the acquisition and use of these prefabricated chunks of language to develop students' to develop their conversational competence. MacMillan's Aviation English by Emery and Roberts (2012) endow with exactly what we needed in designing this syllabus. Developing conversational competence through formulaicity is necessary in non-routine situations.

However, this source covers a number of topics that may cause unusual circumstances and accidents (non-routine situations) where plain English is essential and fluency is highly required. It presents a set of exercises that are adapted to serve fulfilling our research objectives and tackles subjects that draw learners' attention and raise their motivation. Furthermore, for ICAO compliance, in other words, it serves the language aspects and functions required in the target situation. Accordingly, and as we do not only rely on one source, it is still useful and it is a helpful source to be considered.

5.10 Teaching Techniques and Procedures

A number of researchers such as Prabhu (1990) and Dudley Evans and St John (1998) state that there is neither a best method nor technique in teaching ESP; on one hand that provides an open buffet for researchers and designers to choose different teaching methods and techniques. On the other hand, these scholars linked the teaching techniques to the learners abilities, context, standards, and needs analysis.

Consequently, a careful and studied choice the teacher/researcher should make. In aviation English, and as far as the linguistic requirements set by the ICAO and the target-situation analysis results, the researcher applies dictogloss and shadowing as two teaching techniques that help aviation learners develop listening comprehension and practice speaking.

5.10.1 Shadowing and Dictogloss as Teaching Techniques

i. *__Shadowing:__* as a teaching technique, it was developed to teach second language pronunciation (Ricard, 1986). Nowadays, shadowing is highly recommended in teaching formulaic sequences. Wood (2016) describes it as a technique that has potential in developing formulaic sequences as well (p. 150).

- *The procedure:* Within the process of this newly adapted technique, a recorded native speaker talk and a transcript are required. The learner is supposed to read the transcript aloud along with the voice s/he hears from the recording, or imitates sequences

s/he hears without looking at the script. The teacher listens to the attempts and provides feedback to use as a guide and try again. The teacher highlights formulaic sequences on the transcript whether given to the learners or not.

In his research, Hamada (2015) asserts that shadowing developed his sample's (Japanese university students) phoneme perception. While Murphy (2016) sees that interactive, conversational shadowing gives rise to conversational adjustments. Long (1983) considers the latter to positively affect language learning.

Shadowing deals with native speech. The teacher provides recordings of aeronautical communications or interviews played only once (same as in dictogloss) while students try to repeat what has been said individually without any peer discussion or negotiation as far as the form or the meaning of the utterances are concerned. This helps students develop their pronunciation and meaning deduction as well as getting used to native speech especially on radiotelephony; again, given the nebulous nature of audio recordings quality of sound.

ii. ***Dictogloss***: isa teaching technique relies on dictation. Originally, dictogloss is a procedure to provide an alternative to traditional grammar teaching method through written dictation (Wajnryb, 1990). What makes it suitable for teaching formulaic sequences under the lexical approach to develop learners' fluency is next.

- *The procedure:* Wood (2016) proposes the following to implement teaching formulaic sequences through dictogloss.

First, students listen to a dictogloss of sentences containing key formulaic sequences taken from the input text. The teacher reads a brief (usually five sentences) text at normal speed, with students jotting down whatever they can catch, usually key words. They work in teams to reconstruct the entire text, and then compare their reconstruction with the

original text, with their attention directed to
stretches of discourse in which they missed the
mark. Dictogloss texts rich in formulaic sequences
raise awareness of the sequences and their functions
in speech (p. 152).

Dictogloss as a dictation teaching technique is in use to help students construct
information accurately after the teacher dictates a sample text related to aviation or
an aeronautical communication. This will help students develop their listening
comprehension on non-native speech. In addition, it will help them discuss
information and select most accurate and appropriate data to reconstruct what the
teacher has dictated; this would help them develop their information accuracy report
in limited time.

To sum up, both of teaching techniques provide a great deal of help for
students as they are constantly exposed to native and non-native speech as well as
dealing listening and speaking as major language skills required in radiotelephony
communication. Finally, the teaching focuses both on the perception of formulaic
sequences (dictogloss) and the production of these formulae (shadowing) while
practicing to make sure learners develop the holistic acquisition and use of these
sequences, their level of figurativeness, and contextual meaning.

5.10.2 The Lexical Approach

The syllabus is concerned with what students learn and what the courses
contain. However, the method is more in connection to the manner the teaching
process goes within the classroom. But the approach, as defined by Lewis (1993) as
"an integrated set of theoretical and practical beliefs, embodying both syllabus and
method" (p. 2). Since the syllabus is concerned with what in relation to language
teaching, and the method with how, the approach considers the why; in other words,
the appropriacy of both content (syllabus) and procedure (method).

The lexical approach, as theoretical and practical beliefs, focuses more on the
acquisition and use of lexical items to develop fluency and natural speech rather than

the acquisition and productions of strict form of language (grammar). It encourages enlarging learners' vocabulary vessels acquiring larger number of lexical items both as single and multi-word items. The benchmark text of the lexical approach is *Michael Lewis's (1993) The Lexical Approach: the state of ELT and a way forward.* He puts forward a list of principles related to this approach:

- Language consists of grammaticalised lexis, not lexicalized grammar.
- The grammar/vocabulary dichotomy is invalid; much language consists of multi-word "chunks".
- A central element of language teaching is raising students' awareness of, and developing their ability to "chunk" language successfully.
- Although structural patterns are in acknowledgement as useful, lexical and metaphorical patterning have an appropriate status.
- Collocations occur as an organising principle within syllabuses.
- Grammar as structure is subordinate to lexis.
- Successful language is a wider concept than accurate language.
- Socio-linguistic competence-communicative power precedes and is the basis, not the product, of grammatical competence.
- Receptive skills, and particularly listening, have an enhanced status.

As the father of lexis, Lewis makes sure to encourage the learning of lexical items and particularly collocations, and believes that teaching learners "chunking" enhances their fluency and natural speech more efficiently.

5.10.2.1 The Lexical Approach and Formulaic Language

This approach is mainly concerned with teaching lexical chunks of language. In relation to that, formulaic language is the umbrella that covers all these lexical items and scholars interested in applying the lexical approach encourage the teaching of formulaic language because, and as Révész (2011) states that advantages of having a large repertoire of formulaic language or collocational competence are:

- Chunks save processing time;

- Listening, reading – better prediction, texts are not difficult because of unrecognized words but because of a great density of unrecognized collocations;

- Speaking and writing, faster production – increased fluency, more accurate negotiation of meaning;

- Brain has huge storage capacity;

- Grammar for free – chunks bring their grammar with them……;

- Pronunciation for free – chunks bring their rhythm and intonation pattern with them, using chunks increases fluency.

In this context, efficiency is a key indicator of ESP course development and adaptation. Moreover, fluency as a part of communicative competence is highly required in most ESP contexts.

5.10.2.2 The Lexical Approach in ESP

The question we may ask here is whether the lexical approach is compatible, as theoretical and practical beliefs covering the syllabus and the method, to ESP context. Developing learners' communicative competence and fluency in particular is one of the main aims of ESP course design. ESP is more concerned with teaching learners' vocabulary and, registers, which is the main concern of the lexical approach.

In ESP courses, learners find themselves dealing with their specialties using the English language, which might be 'totally new' to them and in which there are, for example, numerous collocations that cause students' errors due to a lack of translation equivalence between their mother tongue and English. Accordingly, learners reach fluency better by retrieving prefabricated chunks of language that makes them more into their specialties using English. Lewis (1997) believes that the ability to chunk language successfully is fundamental to comprehend how language works.

To sum up, Janulevièienë and Kavaliauskienë (2011) "Learning ESP in multi-word chunks means a change for the better in the L2 vocabulary acquisition. It is not

only desirable and beneficial, but also indispensable, because learners become involved in the process of becoming aware of and identifying lexical phrases". Hence, the use of the lexical approach to teach formulaic sequences using activities such as gap filling (both sentence and text levels), pictures labelling, matching, categorising and words searches (see 5.10.2) can help learners reach fluency and avoid any breakdown of communication in the target situation. All the same, using the lexical approach requires the use of specific teaching techniques that both serve learners' needs and be compatible with the theoretical and practical beliefs of the lexical approach.

The use of the lexical approach in ESP is appealing to the researcher because of:

- first, it is best to teach formulaic sequences using the lexical approach as a belief standing on the use of lexis rather than strict form of language to develop fluency;
- Second, it is very beneficial for learners to reach fluency as a part of communicative competence in shorter periods as the latter may control ESP course adaptation (time limitations), and that concerns more our case study (pilots and ATCs during radiotelephony);
- Third, prefabricated chunks of language, collocations in particular, when learnt, are easier to memorise, are retrievable and accessible when needed.

In conclusion, Course design is a challenging task as a whole, each step made and every decision taken by the researcher/teacher/designer must be justified and related to the other elements of the process in order to reach the course's objectives. The following section discusses aviation English and the importance of mastering the language and why avoiding any breakdown of communication on radiotelephony is critical to aviation safety.

5.11 Sample Units

The researcher chooses the following order of the selected units (unit one, unit six and unit eleven) to show the continuity and the progressive nature of the syllabus. Additionally, and as far as formulaic sequences teaching are concerned, the researcher sets the first unit as a short term objective where the learners acquire the notion, nature and different parts of formulaic sequences, and later on the following chapters, formulaic sequences will be implemented within each unit's content and according to its topic. This will help the teacher assess learners' development especially in listening comprehension and fluency. The following are sample units the researcher recommends.

5.11.1 Sample Unit 1:

Formulaic Language

The General Aim of the Unit: at the end of this unit, students will be familiar with the notion of formulaicity and be able to recognise different parts of formulaic sequences and their functions.

Language Functions: discovering formulaic sequences that serve the following functions related to aviation operations:

Language Aspects:

- The acquisition and accurate use of formulae in conversation to avoid breakdown of communication;
- Fluency;
- Pronunciation of sequences;
- Grammatical ambiguities of formulaic sequences;
- Different types and structures of formulaic sequences.

The Script:

This is a picture of a Gulf Airliner, which <u>looks like</u> an Airbus in dispersal waiting probably for some VIP passengers. <u>The reason that I say that</u> is the <u>air-stair door</u> is open. There is a <u>long red carpet</u> going right to the foreground of the picture. There is a cleaner with a brush<u>; it looks like</u> a straw brush, <u>making sure that</u> the carpet is <u>as clean as possible (whistle)</u> before the arrival of the VIP.

There is a man standing by the <u>air-stair doorway</u> waiting for the VIPs. The <u>APU</u> is attached to the aircraft;obviously, the aircrew are in the cabin, the air conditioning is on waiting for the VIP, and right in the foreground of the picture on the <u>right-hand side</u> there is a <u>fan-type palm tree</u>, which is used for decoration in the Gulf.

At the tail of the aircraft <u>it looks as</u> if some baggage has just arrived and halfway along the aircraft, by the engine, there is a group of people who are possibly departure officials waiting to say goodbye to the VIP, <u>so there is an air of expectation about it</u>. It is almost certain to be the Gulf because the <u>visibility is poor</u> with high humidity and a <u>fog like background</u>.

Activity one: answer the following questions:

1. What kind of person is the flight for?
2. Why are there so many people by the aircraft?
3. Where are the people standing in relation to the aircraft?
4. How long after the landing do you think the photo was taken? why?
5. What do you think will happen next?

Idioms

Activity two: Choose the appropriate idiomatic expressions from the following list:

A piece of cake – odds and ends – pros and cons – ups and downs.

1- The teacher asked us to talk about the …………..… of industrial development.

2- The police found nothing special in the house of the criminal as he had taken all the important documents with him, leaving just …………...........… .

3- Don't worry about the problems you have in your business. You know there are always …….....………. in business.

4- If you think that doing this maths problem is ………………….. just try it.

Activity three: Choose the appropriate word from the list to complete the meaning of the idiom:

- **Use – ocean – music – rags – shoulder – pie.**

1- All these promises these politicians make are just …………. in the sky.

2- The small amount of money donated is just a drop in the ………. compared to the large sum of money needed.

3- I had to face the …………….. all by myself although I was not the only responsible for the problem.

4- They had had a dispute yesterday. That's why she gave him the cold ………..

5- He has been successful in his life. He went from ……………… to riches.

6- He spends his time drinking and watching TV. He's no …………. to man or beast.

Activity four: Choose the option that best expresses the meaning of this idiom/phrase.

1- Once in a blue moon, we meet each other.

a) frequently

b) hardly ever

c) very seldom indeed

d) in the light of a blue moon

2- He has been jobless for several months, and it is his wife who keeps the pot boiling.

a) avoids starvation

b) keeps the fire burning

c) is angry

d) keeps firing

3- In the end he had to eat the humble pie.

a) apologise humbly

b) defend himself vigorously

c) adopt an aggressive attitude

d) none of these

4- The officer took him to task.

   a) Rebuked him;

   b) dismissed him

   c) promoted him

   d) praised him

Phrasal Verbs

Activity one: Match the following phrasal verbs (left column) with their accurate meanings (right column).

Break up	=	Cancel
Wake up	=	Leave a bus, train...
Break down	=	Return money
Find out	=	End a relationship
Throw away	=	Destroy a building
Get off	=	Have none left
Call off	=	Quit doing something
Give up	=	Continue
Keep on	=	Put in the trash
Tear down	=	Discover information
Run out	=	Stop sleeping
Pay back	=	Stop functioning

Check out	=	Beat up, ransack (B.E.)
Run away	=	Be excited about the future
Get along	=	Invite on a date
Hold so. /sth. Back	=	Leave a hotel
Sleep over	=	Like each other
Go over	=	Insult so.
Do so. /sth. Over	=	Escape
Break up	=	Ruin a secret
Look forward to sth.	=	Prevent from doing
Give sth. Away	=	Visit so. nearby
Put so. Down	=	Stay somewhere overnight
Ask so. Out	=	End a relationship

Activity two: Write five sentences of your own using the phrasal verbs above. Then discuss them with your classmates.

Collocations

A **Collocation** is when two or more words naturally go together and sound correct together. *Nice weather* is an example of a collocation. We do not say ~~pretty weather~~

Activity one:

Instructions: Choose the best answer to fill the gap in each of the following.

1- The meeting took almost five hours so it was impossible to (Give – have – pay – make - keep) attention all the time.

2- The problem is difficult to (hold – do – make - keep) under control.

3- It took us all day to clean up the office after the burglary - the thieves (did – took – made – had) terrible mess.

4- I don't think we should (make – do – take - create) a decision yet; we should wait.

5- Only 31% of the students who (had – made – wrote - took) the final exam passed it.

6- I think we should look for a new supplier - the one we have at the moment (makes – causes – does) us too many problems.

7- Could you (make – do – give – get – bring) me a favour and post these letters on your way home?

8- I've told him ten times that he's got the wrong telephone number. I'll (be – become – go – get) crazy if they call again.

9- The company offers its employees free language training but not many people (make – do – take – keep) advantage of it.

10- Our personnel assistant is leaving next month - she's (waiting – waiting for – expecting – making) a baby.

Collocations related to fire (unusual circumstances for aviation operations)

Activity two: Match the beginnings with the endings to make a sentence.

1- The controllers alerted the ...	a. Blaze at San Francisco airport.
2- One of the tires caught ...	b. Plastic near his seat.
3- It took eleven fire-fighters to contain ...	c. Engulfed the plane just seconds after everyone had been evacuated.
4- The flight attendant tried his best to extinguish ...	d. The small fire in the washroom.
5- The pilots could see ...	e. Extinguishers on every plane.
6- The emergency fire service sprayed the empanage of the plane with ...	f. Fire on landing.
	g. The fire on the runway.
7- Two fire services were involved in attempting to tackle the ...	h. Smoke coming from under the cockpit door.
8- A passenger though he could smell burning ...	i. Emergency services as soon as they realised there was a problem.
9- There should be several fire ...	j. Foam
10- The flames completely...	

5.11.2 Sample Unit 6

- **Health**

General aim: at the end of this unit, students will be able to deal with medical emergencies inside the plane and report accurate information on health issues.

Language functions:

- Expressing cause and effect.

- Making suggestions and giving advice.

- Giving and asking for updates.

Language aspects:

- medical vocabulary

- consonant clusters

- intonations while listening

Pre-reading activities

Activity one: Label the first-aid kit with the words from the box:

- **bandage – defibrillator – EpiPen – inhaler - plaster – insulin pen – splint.**

Activity two: match each of the events or injuries below with the item of medical equipment that treats it.

1- A severe allergic reaction -------
2- A diabetic episode ------
3- A cut ------
4- A limb fracture ------
5- A severe asthma attack -----
6- A serious head injury ------
7- A heart attack ------

Reading Activities

Activity one: read the article. Match the sections A-E bellow to the events 1-7 above. Some actions may match more than one event.

A _____ - B _____ - C _____ - D _____ - E _____

- **Article**:

Is there a doctor on board?

A- You're midway through a minim flight. When suddenly a passenger collapses clutching his chest and struggling to breathe. This is one of the situations that cabin crew are trained to cleat with, and aircraft are equipped for. So what are some of the most common medical emergencies?

  - The event - a heart attack - is the leading cause of in-flight death, and the leading medical cause of diversions. Medical kits include aspirin and a vasodilator spray to keep the blood flowing when there is chest pain. In case of **cardiac arrest**, cabin crew are trained to give CPR. While many airlines now also carry defibrillators to restart the heart. **Cardiac monitors** are used increasingly, so that data can be transmitted to medical advisors on the ground.

B- A large number of diversions are caused by Injuries to passengers. Items falling from the overhead storage bins are a common cause of head Injury, while unexpected turbulence can easily result in broken bones. **First-aid kits** are equipped with splints and bandages to stabilize **limbs**, as well as plasters for minor cuts.

C- Asthma is a common condition that can be life-threatening, especially when the sufferer's inhaler is in the baggage hold. In addition to oxygen, bronchodilators and adrenaline arc kept in order to open up the **airways**.

D- Dangerous breathing problems can also result from severe allergic reaction, which worries airlines so much that some no longer sate peanuts. Most carry EpiPens, as well as antihistamine and adrenaline to present **anaphylactic shock**.

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E- Most medical kits contain glucose: and glucagon **injections** to treat passengers who suffer hypoglycaemic **episodes**. The disruption of regular eating habits can lead to a dangerous drop in blood sugar levels.

Activity two: read the article again and answer the questions.

1- What event causes most deaths on board planes?

2- What are the two main causes of injury?

3- When can asthma be especially dangerous on flights?

4- What have some airlines done to prevent dangerous allergic reactions?

5- Why do diabetics sometimes have problems with flying?

Activity three: work in pairs and discuss the questions.

1- Have you received training to deal with medical emergencies?

2- What were the most important things you learned?

3- Have you ever witnessed a medical emergency in your job? What happened?

Activity four: Match the words in **bold** in the text with a definition bellow:

1- The tubes in the body that we breathe through _____

2- A sudden attach of an illness _____

3- A box containing emergency medical supplies _____

4- The arms and legs _____

5- A machine for checking how well the heart is working _____

6- A sudden and extremely dangerous allergic reaction _____

7- The sudden stopping of the heart _____

8- A small measure of medicine for putting into the body through a needle _____

Post reading activities

Aim: Expressing cause and effect.

Activity one: try to remember the words and expressions from the article, then look back to check.

1- This is the _____ of in-flight death.

2- A large number of diversions are _____ injuries to passengers.

3- Unexpected turbulence can easily _____ broken bones.

4- Dangerous breathing problems can also _____ severe allergic reactions.

5- The disruption of regular eating habits can _____ a dangerous drop in blood sugar levels.

Activity two: read the following situation:

- You work for a small airline which has had to make a record number of diversions due to medical emergencies in the past year. As a result, it is in serious financial trouble, and it must avoid any more diversions, it has offered a prize for the best suggestions to help it achieve this.

Work in pairs. Think of five inexpensive measures it can take to achieve this. Write down your ideas as five action points. Be creative!

Share your ideas with the group. Vote for the five most original ideas.

5.11.3 Sample Unit 11

- **Fuel**

General aim: at the end of this unit, students will be able to comprehend and report fuel related emergencies and climate change issues.

Language functions:

- Suggesting solutions to problems
- Expressing expectation

Language aspects:

- Accurate use of verbs
- Affixes
- Long and short vowels
- Vocabulary related to fuel and climate change

Fuel Icing

Pre-listening activity:

Activity one: What are the main problems for aircraft flying in extremely low temperatures?

- Discuss it in pairs then share your results with your classmates.

Listening activities:

The script:

PNF = pilot non-flying,

C = control,

PF = pilot flying,

FA = flight attendant

- **C:** Polar 69. Roger. Report turning final, runway 29. Wind 320 at 10 kt.
- **PNF**: Report turning final, runway 29. Wind 320 at 10 kt. Polar 69.
- **PF:** Number one doesn't sound good. We're not running slog of fuel, are we? We should have plenty of fuel.
- **PNF**: We've gel fuel ... but fuel flow should be much hint Torque pressure is mean to be at l00. Not 40.
- **PF**: That's engine number one gone. Feather the engine.
- **PNF**: It's feathered.
- **PF**: Tell them we've got one engine shut down.
- **PNF**: PAN PAN. PAN PAN. PAN PAN. Bodo Tower. Polar 69. We've lost one engine ... or ... were turning final at this lime.
- **PF**: I smell smoke! We're losing the other one. Contact tower and tell them to get the lire trucks out.
- **PNF**: Tower. Polar 69 request lie. Crash, rescue services.
- **C:** Polar 69. Roger. I'll activate fire, crash, rescue. Say your fuel and persons on board.
- **PNF**: Polar 69. Roger. We've get two Crew and 120 passengers. I don't know about fuel. We've got a fuel problem.

- **PF**: Can we get the other engine going? We're not going to make it ... we'll have to land on the river.
- **PNF**: Tower. We've lost both engines. We're on final here to the river. Polar 69. You want the gear up?
- **PF**: Yeah put it up. We don't want it to catch on the ice. We've got smoke. Shut down number two.
- **PNF**: Pull both extinguishers?
- **PF**: Fire bottles. Tower, this is Polar 69 we're down on the ice, nobody is hurt. We had a fuel flow problem and we lost power in the engines and couldn't get to the runway. We're on fire over here though...

Activity one: Listen to the incident and answer the questions.

1- What can you say about the weather conditions?
2- What happens to the flight as it enters the control tower's airspace?
3- What happens in the end?

Activity two: Listen again and <u>underline</u> the correct information.

1- Fuel flow is *lower / higher* than it should be.
2- The reading of torque pressure should be *40/ 100*.
3- The pilots request *fire, crash, rescue services / vectors from the control tower.*
4- There are *22 / 122* people on board.
5- The pilots land *on a river / in a field*.
6- *Nine / No* people are injured after the landing of the plane.

Pronunciation - Long and short vowel sounds.

Activity three: Listen to eight words. Write A or B according to the word you hear.

Script: shot cot seat fit leave slot chat mark.

A	B
- Shot	- Short
- Cot	- Caught
- Sit	- Seat
- Hit	- Heat
- Live	- Leave
- Stat	- Start
- Chat	- Chart
- Mach	- Mark

Activity four: Listen again and repeat the words.

Activity five: Work in pairs. Take turns to read one word from each line. The person listening must say if they hear A or B.

Activity Six: make words that match the definitions by adding the prefixes in one box to the verbs and adjectives in the other box.

ab-   de-   dis-   in-   out-   over-   re-   trans-   under- un-

Perform – crowded – operative – powered – ice – start – realistic – used – normal - atlantic

1- Across the ocean _____.

2- No longer used _____.

3- Not having enough power _____.

4- Not probable _____.

5- Not working _____.

6- Not usual   _____.

7- To perform better than something else _____.

8- To remove ice   _____.

9- To start again   _____.

10- Containing too many people _____.

Post listening activities

Functional English - Expressing expectation

We often use *should*, *be supposed to* and *be meant to* to express how the situation is expected to be, especially when there is a problem.

- Fuel flow is very low, it **should be** much higher.

- You'**re supposed to be** on final now. Are you OK?

- Torque pressure **is meant to be** at one hundred. Not forty.

Activity one: Complete the sentences using *should*, *be supposed to, be meant to* in the correct form.

1- The temperature is high but

- *It should be much lower*   (should).

2- The fuel flow is low but

- _____   (should).

3- The light is on but

- _____   (should not).

4- The landing gear is down but

- _____   (not supposed).

5- The supply is still on but

- _____   (meant).

6- The torque pressure is at 40 but

- _____   (meant).

7- They don't have enough fuel but

- _____   (should).

8- They're not on final but

- _____   (supposed).

9- The warning lights are flashing but

- _____   (not meant).

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Activity two: work in pairs. Make a list of rules or procedures that are not always followed correctly. Try to use the language from activity one. Then compare your list with the rest of the group.

Speaking

Activity three:

    1.Work in pairs. You are going to help each other deal with fuel problems while flying. Student A look at section 1, Student B look at section two.

<u>**Section one:**</u>

Student A

1 You are a flight instructor on the ground. Your partner is a student pilot on a solo flight in a Cessna 172SP. He / She has fuel problems and engine power loss. He / She can't remember all of the power loss checklist and is busy trying to fly the aircraft. You have radio communications. The checklist on the right shows the correct control settings for the situation. Find out what mistakes the pilot has made and correct them. Use language from the Functional English section.

ENGINE POWER LOSS DURING FLIGHT

air speed	= 68 KIAS
fuel shut-off valve	= ON (= fully in)
fuel selector valve	= BOTH
auxiliary fuel pump switch	= ON
mixture	= RICH (= fully in)
ignition switch	= BOTH

2. Change roles. Your partner is the flight instructor on the ground. You are a student pilot on a solo flight in a Cessna 172SP. You have fuel problems and are going to make a power-off landing. You can't remember all of the manual's checklist for this situation. You have radio communications. Listen to your instructor and use the picture to check your control settings. Find out what mistakes you have made and correct them.

Section two:

1_ You are a student pilot on a solo flight in a Cessna 172SP. Your partner is the Flight instructor on the ground. You have fuel problems and engine power loss. You can't remember all of the manual's checklist for this situation. You have radio communications. Your instructor will tell you the correct readings and control settings for power loss. Check them against your control settings in the picture, and find out what mistakes you have made. Use language from the Functional English section.

2_ Change roles. You are a flight instructor on the ground. Your partner is a student pilot on a solo flight in a Cessna 172SP. He/she has fuel problems and is going to make a power-off landing. He/she can't remember all of the checklist and is busy trying to fly the aircraft. You have radio communications. Go through the checklist below. Find out what mistakes he/she has made and correct them.


```
POWER OFF LANDING

air speed            = 68 KIAS
transponder code    = 7700
mixture             = IDLE CUT-OFF (= fully out)
fuel shut-off valve = OFF (= fully out)
ignition switch     = OFF
flaps               = 30 or FULL
```

5.12 Additional Pedagogical Implication

It is important to note that ESP situation in Algeria is in a progressive phase, maybe not as required but steadily developing. Many stakeholders and Researchers from both linguistic and field specialties are paying more attention to the English for specific subjects and its development in the country, here are some of the implications the researcher believe they would help this process.

5.12.1 Implementing Formulaic Sequences in Teaching General English

The situation analysis revealed that before beginning ESP programme, the teacher uses the "New Interchange" books one and two in order to teach general English. The beginner and intermediate levels help students' gradual language learning moving to more complex and challenging language aspects and skills. Each

programme includes four levels, four units each. So far, it sounds quite satisfactory for the beginning of the educational career of these students as far as the English language is concerned. However, the researcher encourages and recommends the use of formulaic sequences within the intermediate part of the programme in two ways (See 5.5). First, by introducing formulaicity and its parts to students, as the researcher proposed the first unit within the proposed ESP syllabus. Second, it is best to encourage students to use these formulae while practicing speech activities to develop their communicative competence and acquire prefabricated chunks of language related to general English before acquiring the ones related to their subject specialty.

Finally, and as a step before beginning their careers, formulaicity will help students get higher levels at the compulsory English language proficiency test according to ESP teacher and two nationally certified assessors at Aures Aviation Academy, since idiomaticity is a key indicator of language proficiency and adds up points for the candidates "Vocabulary- Level 5" (see table 1.1)

5.12.2 The Use of Technology and other Materials Outside of the Classroom

ESP teacher is more than just a guide or educational materials provider; in addition to his/her role inside the classroom, it is always recommended that the teacher plays a role in engaging students in activities outside the classroom. The researcher avoids labelling these activities as homework because of the backlash this tag has received and still receiving among students.

This of course does not concern only EFL students but actually is of a more concern for ESP learners. The latter generally have less interest in ESP course as we have noticed through checking a number of studies and during the observation sessions. Thus, the researcher recommends ESP teachers in general and EAvP in particular to encourage students to practice English outside of the classroom.

In our case, the researcher provides aviation students with an android system mobile application that they can use on their phones, and be up to date with current incidents and unusual circumstances. Aviation Herald Reader is a mobile application that puts into display a large number of incident reports from all over the world with

detailed information and pictures. This application can help learners be up to date with current issues in aviation and the language used in such situations (plain English) which is our main concern. The teacher asks students to provide oral reports on which they describe the situation and give extra information on how to deal with these unusual circumstances as pilots or ATCs.
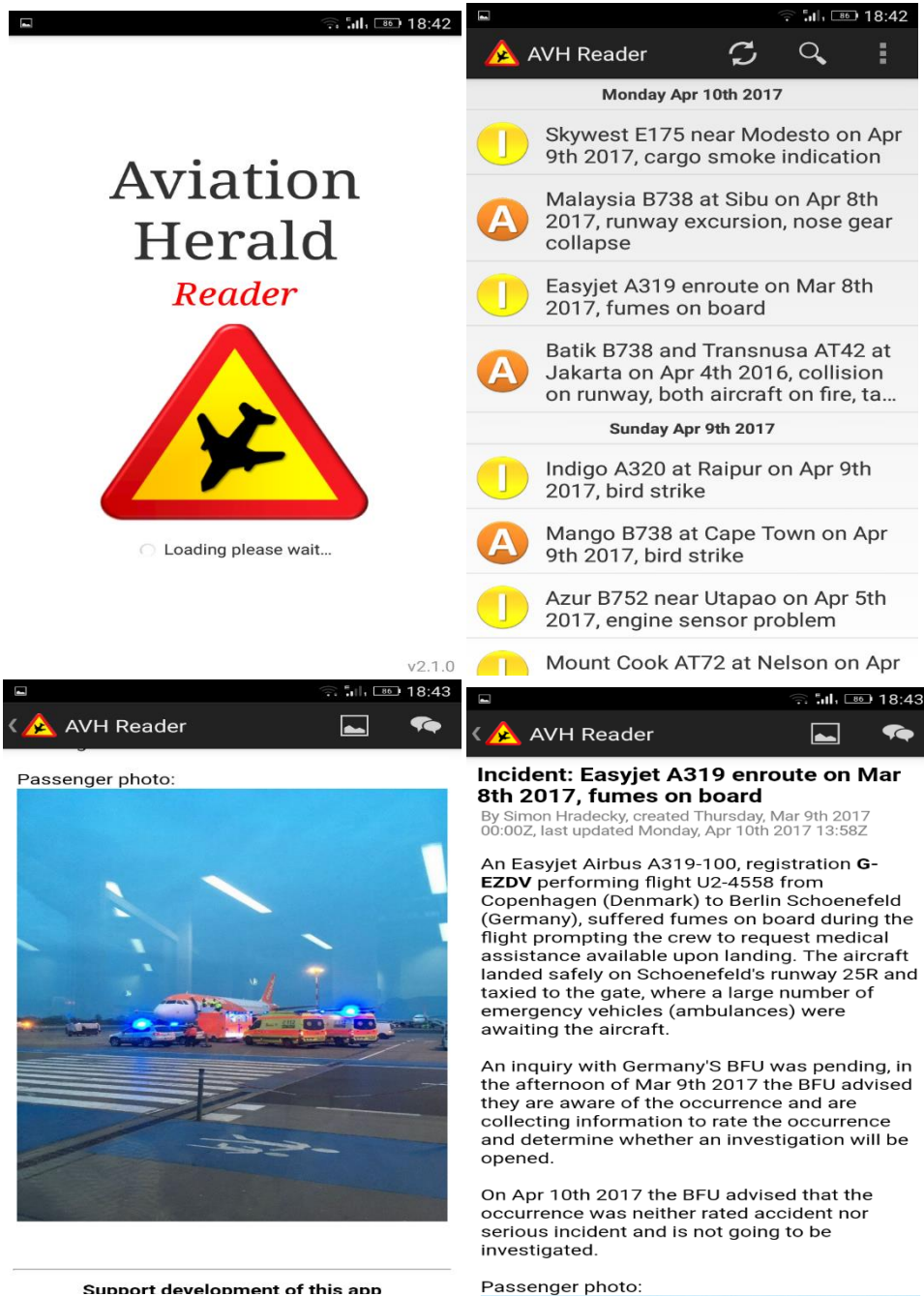
Figure 5.1: Aviation Herald Reader (Mobile Application)

This application can help students stay up to date and acquire more lexical items related to aviation in general and non-routine situations in particular. Students discuss what they have noticed in the classroom or outside and share opinions and perspectives on unusual circumstances and practice what they learnt without compulsory homework or tedious practices assigned by the teacher.

YouTube and liveatc.com can provide a large amount of data and help students develop their listening comprehension by playing records and acquiring new lexical items and be familiarised to different accents as liveatc.com provides live broadcasting of most radiotelephony communication around the world and on live stream. Students can either use it via computer or download the mobile application as well.
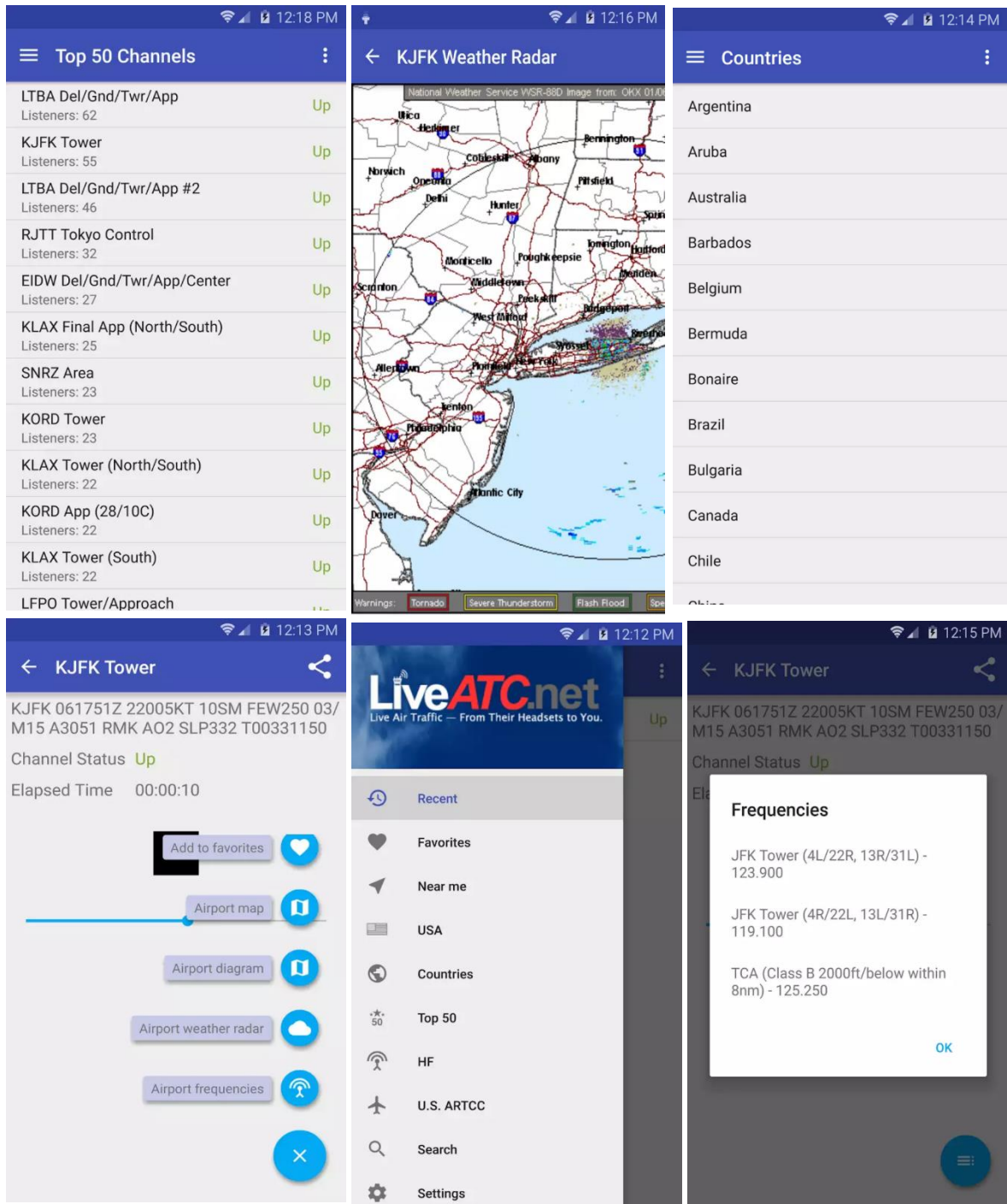
Figure 5.2 : LiveAtc (A Website and a Mobile Application)

Liveatc.com can be of great interest for students because it offers live streaming and students can be brought into the light of the manner radiotelephony communication are conducted.

In relation to both implications above (see 5.12), and even though we do recommend formulaicity for improved pragmatic skills, we also suggest for teachers

to expose EFL learners more often to native speech to gain some insights on language use and usage as a trigger on the path of reaching fluency through formulaicity.

5.13 Conclusion

This chapter has shed light on the process we have followed in order to design an adequate syllabus for Algerian pilots and air traffic controllers. The syllabus is based on an organised framework of standards to fit the expectations of the aviation community in Algeria. It is important to note that the design presents topics that are in correlation with common, concrete and work related topics; in other words, the target needs situation. It aims at covering the most important language aspects and functions in order to reinforce learners' lacks and meet target situation linguistic requirements. The syllabus puts extra focus on listening and speaking as they are the only language skills needed in voice only communication through radiotelephony.

Different types of activities, teaching materials, and instructional aides the researcher relies on in order to create a comfortable and encouraging learning context and meet students' learning needs. Additionally, extra challenging tasks he designs at the end of each unit to create a kind of competitiveness between learners and enhance their oral language production in a motivating entourage. The content and activities of the syllabus aim also at developing conversational competence in plain English to help avoid any breakdown of communication most notably in non-routine situations. The researcher implements Formulaic sequences, since they can help learners achieve their communicative needs with less processing and in shorter periods because of the holistic nature of acquisition and use of these formulae.

CHAPTER SIX : Learners' Assessment and Course Evaluation

CHAPTER SIX : Learners' Assessment and Course Evaluation

6.1 Introduction

6.2 Consolidating the Previous Process's Phases

6.3 Testing in ESP

6.4 Different Perspectives on Proficiency Tests

     6.4.1 Vocabulary

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6.9 Conclusion

6.1 Introduction

The world develops as you are reading these words. The development comes with changes and evolvement in every aspect of one's life. As far as education is concerned, stakeholders realise that the focus nowadays is on learners. In ESP, the development in different fields and the demands of qualified individuals from every part of the globe has led to study different linguistic necessities for each different group because of their diverse capacities and attitudes. Thus, the difference leads the people involved to have instructions sessions accordingly to help them adopt necessary skills required to be operational and perform well within their workplace.

Instruction and evaluation go hand in hand in every teaching/learning process; consequently, as we repeatedly focused on "difference", every instruction process has a different or a specific evaluation procedure and requirements. The procedure itself consists of two levels: learners' assessment and course evaluation that are the backbone of ensuring a successful educational operation. This success is a measure the researcher takes by the fulfilment of the course objectives, and eventually by helping learners accomplish the communicative tasks within the target situation.

In this chapter, the researcher discusses a provision for the following:

- First, the learners' assessment by providing a set of tasks in order to implement both a formative and a summative assessment, which may not differ in content but rather the function of the tasks. That is to say, the former focuses on the development of learners' communicative competence by acquiring the nature and practicing formulaic sequences.

- Second, and in order to evaluate the course, it focuses on the fulfilment of the course goals and objectives that are related to the learning and target situation requirements set by the needs analysis process.

6.2 Consolidating the Previous Process's Phases

The main aim of the whole process cannot be realised without assessing learners' development and performance in addition to the course's effectiveness. The former comes to recognise and demonstrate the development of learners' performance throughout the instructional process; in other words, their recognition and adaptability to the course's content, teaching method, applied techniques, and designed materials. The latter is more of a generalising phase that comes to sum up and close, or leave some space to modify any of the elements assessed earlier in the operation.

The closing or the modification is a result of either fulfilling the objectives of the course or not. In other terms, either the course is actually functioning well as far as what the researcher designs it to do. If not, any modifications or revision is required to reach a general successful teaching/learning experience (see diagram5.1). As a result, and as Benyelles (2009, p. 58) states "Testing is oriented toward specific purposes, therefore, the testing framework will have to follow the same methodology, i.e. it is not a test as such, but a reinforcement and consolidation of what has been taught".

Before making sure of meeting the objectives of the whole process through testing, Rivers (1968) asserts that the teacher must ask him/herself the following questions to understand the basic standards of testing:

> What is my purpose in testing these students?;
> How is this related to the objectives of this course? ;
> What do I expect this test to show?;
> What precisely is being tested by this method of testing?;
> Am I really testing what my students have been learning?;
> By using these tests am I really finding out what my
> students know? (P. 346)

By answering these questions, it means the teacher has a good control over the general principles of testing and s/he will be able conduct a feasible

and organised testing procedure to be able to reach the objectives of the course in general or as Benyelles (2009) specifies

> To be able to answer these apparently simple questions means to understand the principles of testing. The assessment allows the teacher to check whether the objectives of the course have been reached. It provides an idea about the level of comprehension and present knowledge of the learners after a lesson presentation. Making use of the fact that a lesson is a response to specific needs of the students, the tests assess how much these needs have been satisfied. (P. 58)

Hutchinson and Water (1987) state three types of testing as follows:

> -   Placement test: these are used to 'place' learners in the ESP course most suited to their needs. The placement test normally comes at the beginning of the course.
> -   Achievement tests: these test how well the learner is keeping up with the syllabus and can be administered anytime through the course.
> -   Proficiency tests: these assess whether or not the student can cope with the demands of a particular situation, for example, study at university or reading technical manuals. (P. 146)

Thus, assessment and evaluation is an important process that helps determine the effectiveness of the course through learners' development and performance.

6.3 Testing in ESP

In this section, the researcher opts to present and elaborate his vision on testing in ESP and how he is going to assess his students and how to evaluate the course. In this part, he discusses different tests by providing different samples; additionally, he discusses the learners' assessment and the course evaluation in theory and in practice in relation to the research's case study and interest.

- **Learners' Assessment**

The main focal point of this type of tests is to facilitate the teacher's tasks in identifying the amount of language the learners cover and what they already recognise. The process comes in the form of an analysis that aims at scrutinising learners' language performance in order to pinpoint their linguistic difficulties and bridge the gap between the latter and providing repairing techniques to enhance their performance through positive feedback on which the teacher bases his/her designed courses. To sum up, learner assessment helps the teacher in both identification of the individual language difficulties learners' face, and in obtaining data that helps develop learners' language performance through the development of the quality of the course.

6.3.1 Placement tests:

i. In Theory

It is always necessary for the teacher to have an idea about the learners' capacities in order to ensure the accuracy of the teaching experience in general. More specifically, to be able to place the learners and identify whether they actually need the course and what kind of course would serve them well. Hutchinson and Waters (1987) assert that the main aim of the placement test is to settle on a clear perspective on learners' state of knowledge before the beginning of ESP course.

Thus, the placement test is a proficiency test that assesses students' linguistic aspects (grammar and vocabulary ...) and skills (receptive and productive). In doing so, the teacher will be able to place the learners according to their language level and decide whether certain points are to be discussed or not; thus, promoting the accuracy of the instructional operation to meet learners' needs.

Alderson and Hughes (1981) express their concern on whether tests can accurately help the teacher diagnose learners' needs. However, there is still no other option or more accurate instrument in teachers' hands to do so; thus, Hutchinson and Waters (1987) encourage the use of this type of tests, and assert that this instrument is only an "approximate guide" and must be treated carefully.

The diagnostic nature of the placement test provides assistance for the teacher to indicate the learners' lacks. In addition, to what marks them out as non-proficient language learners/users. In other words, this type of tests is formative in value, that is to say, placements tests will help the teacher indicate the what (the content of the course) and the how (the method to be applied) in order to experience and satisfying instructional operation for both parties, the teacher and learners. To sum up, the placement test should not only show what learners lack, but also what potential for learning can be taken into account and take advantage of in ESP course (Hutchinson and Waters, 1987).

ii. In Practice

In aviation, it is essential for aeronautics' professionals to have an operational language level to be able to perform adequately in routine and non-routine situations. The researcher always takes into consideration both, the linguistic requirements set by the ICAO and the needs analysis outcomes when discussing most of the teaching/learning process and steps because of the sensitivity of the subject and its significant assistance for the accuracy of the course design, application and evaluation.

The teacher applies the placement test in order to place learners according to their language proficiency level. The test used consists of a number of formulaic sequences. The researcher chooses these formulae carefully according to their form, frequency, degree of figurativeness, and contextual meaning. This will help taking a step forward in teaching vocabulary, listening comprehension, and fluent oral production of language. The researcher discusses the reason behind this choice on (2.14).

The teacher will not only depend on formulaicity in his placement test; however, it is a significant indicator of learners' fluency and communicative competence as it covers well the vocabulary part of language and ensures a developed listening comprehension and fluent production of language. On the same train of thought, grammar is not highly required since learners have to have a good control over basic grammatical structures only. Thus, the teacher focuses on formulaicity as

an indicator of learners' conversational competence to be in place according to their perception of the formulae and the accuracy of meaning they extract from records played. The use of formulaic sequences is also of a great importance; however, the teacher will be applying this on the other two types of tests to assess learners' progressive development since listening comprehension is what is more important at this stage.

6.3.2 Achievement Test:

i. In Theory

The achievement test is the type of tests used by the teacher and can be administered anytime during the course to measure the learners' language perception, production, and skills. This development is in tight relation to the needs analysis and identification outcomes, therefore to the target situation linguistic requirements dealt with while designing the syllabus. Alderson and Hughes (1981) add that this type of tests does not have to conform to external influences, but should rather reflect the nature and content of the course itself (cited in Hutchinson and Waters, 1987, p. 147). The latter proposes a number of basic principles to follow in order to construct tests generally and achievement tests specifically:

1- Test what you can reasonably assume the learners have learnt. This is not necessarily the same as what you have taught.

2- Your test should test what you actually want it to test. Don't, for example, make a test of reading ability dependent on the ability to write. A learner may well be able to read and understand something, but not able to put the idea down in writing.

3- Avoid bias in the test. Don't, for example, write test items which demand specialist subject knowledge or cultural knowledge. This is a problem with any kind of language test, but it is probably more apparent in ESP tests, which may often involve the use of specialist content – technical, commercial, medical, and so on. The important point is that getting the correct answer should not depend on specialist subject knowledge *outside* the material used in the test. (P. 147)

Based on these principles we can notice the degree of specificity and accuracy required for such tests. The teacher should keep the content, skills, and functions to be assessed and measured very precise as this test, mostly to be constructed by the teacher himself.

ii. In Practice

The teacher chooses to rely on McMillan Aviation English as a suitable collection of materials approved by the ICAO and meets most of the learners' needs to communicate effectively within the target situation, i.e. radiotelephony communication. However, and in order to facilitate the communication between pilots and air traffic controllers, most notably in non-routine situations where plain English is required and listening comprehension accuracy is highly crucial for successful message reception and delivery as well.

Formulaic sequences help learners reach fluency and help them decrypt ambiguous messages especially by native speakers who tend to use plain English often even on everyday communications and routine situations. As formulaic sequences are a basic constituent of the English language, the researcher tends to assess learners' perception and production of these formulae. In this respect, the teacher will have to design a set of tests in order to evaluate learners' understanding of formulaic sequences.

The teacher focuses more on the detection of these prefabricated chunks of language first. Then, there are other aspects to take into account such as the translation of these formulae according to the contextual meaning and assessing students' understanding on the form of formulaic sequences either fixed expressions or chunks of language with fillable slots. It is very significant to follow the basic principles of testing stated above and meeting the exact language aspects, skills and functions on these tests.

To sum up, the teacher will have to test the exact prefabs implemented in the syllabus such as phrasal verbs, collocations, and idiomatic expressions. What is vital in this test is the understanding of language chunks with low and high figurativeness and situation bound sequences. On the same wavelength, the teacher has to consider

the practice of the learnt expressions to ensure that the learners have precise understanding of the notion of formulaicity in general.

The focus on prefabs comes as a result of their significant importance for the listening comprehension related to learners' target situation (routine and non-routine situations throughout radiotelephony communication); moreover, that listening comprehension, fluency, and successful interaction are met by students first within the mandatory English language test (ICAO compliance) to become certified pilots (See 1.5.3).

At the end of each unit, the researcher conducts an achievement test to check the development of the students' fluency and communicative abilities and the occurrence of formulaic sequences learnt during the unit.

This assessment comes in the form of:

a- A recording, or several recordings of an aeronautical communication played only once for students as they take notes. Each couple of students sit back to back, in order to get used to the voice only communication within their workplace (cockpit). At the end of the recording which is played in parts, to allow students to take notes, a student (captain) shares with his colleague backing him (first officer) the information he got (listening to the recording) and vice versa , checking and clarifying until they are satisfied with the details they have. As a last resort, and only if both of them are not sure about a certain detail, they get back to the teacher who holds a transcript of the recording and ask about a specific detail "please say again pilot/ please say again ATC, please say again problem". When students finish their checking and clarifying details, the teacher asks one of them or both to report a short summary of all the communication. The aim of this assessment is to help students practice different language functions (clarification, request...) and be able to produce continuous stretches of speech and avoid breakdown of communication.

b- In the second part, the teacher provides each student with an unusual circumstance or an emergency situation to think about for one minute, after that students share their responses each in two minutes explaining the different procedures s/he goes through in order to be able to attain the safest solution.

At the end of each presentation, the student answers questions asked by his classmates/colleagues and discusses their comments on the procedures s/he followed.

- The recordings/scripts and the scenarios provided by the teacher should match the unit's topic to ensure the consistency and usefulness of the teaching/learning experience. In addition, the teacher uses "Aviation Herald Reader" which is an android application that provides updated unusual circumstances and incidents around the world to keep students posted with the latest information in the field of aviation and draw their interest and attention.

6.3.3 Proficiency Test

- *In Theory*

As we have discussed the fuzzy boundaries between what might and what might not be considered as formulaic, researchers also believe in the fuzziness between formative and summative assessment as far as the application is concerned. In theory, this type of tests is summative in nature. It is half way between learners' successful learning experience and their fulfilment of the language requirements for their target situation. The teacher administers this test at the end of a specific instructional period, project, semester, programme, or as in our case a defined course. The purpose behind this is to evaluate the eventual learning and skills acquisition by the students.

On the other hand, and as far as the teacher/researcher is concerned, it helps him/her make sure to reach the course objectives and goals. According to Abbot (2014) there are three main criteria defining the summative assessment:

- The tests, assignments, or projects are in use to determine whether students have learned what they must learn. In other words, what makes an assessment "summative" is not the design of the test, assignment, or self-evaluation, per se, but the way it is used—i.e., to determine whether and to what degree students have learned the material they took.

- Summative assessments take place at the conclusion of a specific instructional period, and therefore they are generally

evaluative, rather than diagnostic—i.e., they are more appropriately used to determine learning progress and achievement, evaluate the effectiveness of educational programmes, measure progress toward improvement goals, or make course-placement decisions, among other possible applications.

- Summative-assessment results are often recorded as scores or grades that are then factored into a student's permanent academic record, whether they end up as letter grades on a report card or test scores used in the college-admissions process. While summative assessments are typically a major component of the grading process in most districts, schools, and courses, not all assessments considered as summative are graded.

As a summary, proficiency tests in ESP tend to link between the materials that the teacher taught and learners' expected performance within the target situation. The teacher measures this process through the effectiveness of the educational operation and the progress towards meeting the stated objectives/goals.

6.4 Different Perspectives on Proficiency Tests

Proficiency tests are in close relation to determining the proficiency level rather than judging learners to pass or fail the task. Davies and West (1984) elaborate that "proficiency testing designed to assess whether candidates will be able to perform the language tasks required for them" (cited in Hutchinson and Waters, 1987, p. 149). Accordingly, the candidates will have to show a certain degree of language proficiency that allows them to perform effectively in every situation within their workplace and avoid any breakdown of communication or misunderstanding as this might, more likely, to affect their task performance in general.

This type of tests is first and foremost criterion-referenced. Hutchinson and Waters (1987) elaborate the concept by stating that the teacher assesses the ability of the learner in accordance to how much it matches the criteria set to be indispensable for language proficiency in a specific task or tasks. As a result, and as stated above,

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it is closer to the indication of the degree of proficiency related to the task at hand rather than pass or fail kind of testing. The researcher designs these tests following the EALTS (English for Aviation Language Testing System); however, he makes sure the design links taught materials to target situation requirements, which are also followed by the EALTS in relation to the ICAO linguistic requirements (discussed on the practical section).

- *In Practice*

To trail the features of proficiency tests, the researcher uses the EALTS test as a model of assessment that fulfils the proficiency requirements and meets the objectives of the course. This test (defined and elaborated next) helps the teacher to assess the degree of proficiency for his learners in correlation to the ICAO linguistic requirements.

Formulaic sequences have a main positive effect on learners' conversational competence. According to the needs analysis outcomes, the learner will be able to communicate effectively, once they accurately understand and use formulaic sequences; in other words, this will enhance the learners' listening comprehension and fluency.

What relates formulaic sequences to the ICAO linguistic requirements is the following: Idiomaticity is a key factor in indicating the learners' proficiency level, more accurately in vocabulary from level four to level five according to the ICAO holistic descriptors as shown below. The teacher takes into account the table(table 1.1) and the objectives of the adapted syllabus (see 5.5) to ensure the link between what s/he taught and the target situation requirements in designing the proficiency test; however, here the researcher focuses on the three descriptors related to formulaic sequences.

6.4.1 Vocabulary

According to the ICAO, vocabulary must cover common, concrete and work related topics. Novice pilots and air traffic controllers need to acquire vocabulary related to aviation in order to communicate effectively; thus accuracy is important

for aeronautics professionals. However, idiomaticity plays a major role as far as vocabulary in aviation is concerned as the following table shows.

Pre-operational 3: Vocabulary range and accuracy are often sufficient to communicate on common, concrete or work-related topics, but range is limited and the word choice often inappropriate. Is often unable to paraphrase successfully when lacking vocabulary.	Operational 4: Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete and work-related topics. Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.	Extended 5: Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete and work-related topics. Paraphrases consistently and successfully. Vocabulary is sometimes idiomatic.	Expert 6: Vocabulary range and accuracy are sufficient to communicate effectively on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced and sensitive to register.
Gaps in vocabulary knowledge and/or choice of wrong or non-existent words are apparent at this level. This has a negative impact on fluency or results in errors which could lead to misunderstandings. The frequent inability to paraphrase unknown words or in the process of clarification makes accurate communication impossible.	An Operational Level 4 speaker will likely not have a well-developed sensitivity to register (see glossary on page (ix)). A speaker at this level will usually be able to manage communication on work-related topics, but may sometimes need clarification. When faced with a communication breakdown, an Operational Level 4 speaker can paraphrase and negotiate meaning so that the message is understood. The ability to paraphrase includes appropriate choices of simple vocabulary and considerate use of speech rate and pronunciation.	Extended Level 5 speakers may display some sensitivity to register, with a lexical range which may not be sufficient to communicate effectively in as broad a range of topics as an Expert Level 6 speaker, but a speaker with Extended proficiency will have no trouble paraphrasing whenever necessary.	Level 6 speakers demonstrate a strong sensitivity to register. Another marker of strong proficiency seems to be the acquisition of, and facility with, idiomatic expressions and the ability to communicate nuanced ideas. As such, use of idioms may be taken into account in assessment procedures designed to identify Level 6 users in a non-radiotelephony context. This is not however intended to imply that idiomatic usages are a desirable feature of aeronautical radiotelephony communications. On the contrary, use of idioms is an obstacle to intelligibility and mutual understanding between non-expert users and should therefore be avoided by all users in this environment.

Table 6.1: Different Levels of Proficiency in Vocabulary as a Holistic Descriptor by the ICAO

We can notice from the table above that idiomaticity plays a major role in identifying the learner as a proficient language user. At operational level four, the learner is not required to master idiomaticity and with this level the learner will be able to operate internationally.

However, and as the main focus of this research is non-routine situations such as incidents and unusual circumstances, this table is designed for routine and day-to-day operations only; thus, it is important to us to clarify the idea by encouraging the learning of formulaic sequences in order to ensure a safe communication and flight.

6.4.2 Comprehension

What the teacher focuses on more on this table is the unexpected turn of events and linguistic complications. The information received and provided should both be clear and concise to ensure flights' safety

Pre-operational 3: Comprehension is often accurate on common, concrete and work-related topics when the accent or variety used is sufficiently intelligible for an international community of users. May fail to understand a linguistic or situational complication or an unexpected turn of events.	Operational 4: 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.	Extended 5: Comprehension is accurate on common, concrete and work-related topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events. Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.	Expert 6: Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.
Level 3 comprehension is limited to routine communications in optimum conditions. A pilot or controller at this level would not be proficient enough to understand the full range of radiotelephony communications, including unexpected events, substandard speech behaviours or inferior radio reception.	As with all Operational Level 4 descriptors, comprehension is not expected to be perfectly accurate in all instances. However, pilots or air traffic controllers will need to have strategies available which allow them to ultimately comprehend the unexpected or unusual communication. Unmarked or complex textual relations are occasionally misunderstood or missed. The descriptor of Operational Level 4 under "Interactions" clarifies the need for clarification strategies. Failure to understand a clearly communicated unexpected communication, even after seeking clarification, should result in the assignment of a lower proficiency level assessment.	Level 5 users achieve a high degree of detailed accuracy in their understanding of aeronautical radiotelephony communications. Their understanding is not hindered by the most frequently encountered non-standard dialects or regional accents, nor by the less well-structured messages that are associated with unexpected or stressful events.	Level 6 users achieve a high degree of detailed accuracy and flexibility in their understanding of aeronautical radiotelephony communications regardless of the situation or dialect used. They further have the ability to discern a meaning which is not made obvious or explicit ("read between the lines"), using tones of voice, choice of register, etc., as clues to unexpressed meanings.

Table 6.2: Different Levels of Proficiency in Comprehension as a Holistic Descriptor by the ICAO

The complications might be a result of misunderstanding a number of lexical items that the non-native speaker is not familiar with. This would not happen while using phraseology because it is the same all over the world and it is basic for any aeronautics professional. However, and in relation to our focus, the non-routine situations and the use of plain English, the teacher assesses the learners'

comprehension and use of formulae as a result of the large number of these prefabs in English generally, and in native speech particularly.

6.4.3 Fluency

The teacher takes into account the smooth flow of language and recurrent hesitations as they play a major role in aviation talk through radiotelephony. These will not cause any problems when both aviation professionals, pilot to ATC or pilot to pilot, are communicating in a less active air space; however, in busy airports or during non-routine situations, both aeronautics professionals should keep the flow of the communication and avoid any hesitations to ensure the safety of the flight.

Pre-operational 3: Produces stretches of language, but phrasing and pausing are often inappropriate. Hesitations or slowness in language processing may prevent effective communication. Fillers are sometimes distracting.	Operational 4: Produces stretches of language at an appropriate tempo. There may be occasional loss of fluency on transition from rehearsed or formulaic speech to spontaneous interaction, but this does not prevent effective communication. Can make limited use of discourse markers or connectors. Fillers are not distracting.	Extended 5: Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device. Can make use of appropriate discourse markers or connectors.	Expert 6: Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.
The slowness of speech flow at this level is such that communication lacks concision and efficiency. Long silent pauses frequently interrupt the speech flow. Speakers at this level will fail to obtain the professional confidence of their interlocutors.	Speech rate at this level may be slowed by the requirements of language processing, but remains fairly constant and does not negatively affect the speaker's involvement in communication. The speaker has the possibility of speaking a little faster than the ICAO recommended rate of 100 words per minute if the situation requires (Annex 10, Volume II, 5.2.1.5.3 b)).	Rate of speech and organization of discourse at this level approach natural fluency. Under appropriate circumstances, rates significantly higher than the ICAO recommended rate of 100 words per minute can be achieved without negatively affecting intelligibility.	Fluency at this level is native-like or near native-like. It is notably characterized by a high degree of flexibility in producing language and in adapting the speech rate to the context of communication and the purposes of the speaker.

Table 6.3: Different Levels of Proficiency in Fluency as a Holistic Descriptor by the ICAO

In aviation communication through radiotelephony, distracting starts and stops, distracting fillers in the form of hesitation (eh..., em..., er...), and inappropriate silence all are to avoid. Timing is very crucial in radiotelephony, and taking too much

time on the radio is hazardous. Formulaic sequences can act as fillers and help learners ensure a smooth flow of speech that is highly recommended.

In the table above, the ICAO recommends the use of discourse markers and connectors which are considered to be prefabricated chunks of language; i.e. formulaic expressions. Besides, the transition from formulaic speech to spontaneous interaction does not refer that spontaneous speech is prefabs-free; this is an indication for the transition from aviation phraseology to plain English, which as we stated before, contains formulaic sequences.

To sum up, the teacher is not only considering these three descriptors in designing the proficiency test, he is also taking into account grammar, pronunciation, and interaction. However, three factors affected the researcher's choice based on the needs analysis outcomes. The first three are of more importance as they shape a successful communication. Second, our learners do not have any deficiencies as far as pronunciation and grammar are concerned. While the interaction is also a part of the proficiency test in the form of, the functions used in aviation communication (confirm and clarify, see 6.6.ii). Third, these three descriptors are in relation to formulaic sequences in either comprehension or use as we explained above. The next part elaborates more specifically the design of the proficiency test using the EALTS model.

6.5   The Proficiency Test Using the EALTS as a Model

The current section aims at elaborating the researchers' perspective on developing the proficiency test based on the EALTS principles and form. What he focuses on and ensures is the fundamental principles of the proficiency test and taking into account the assessment of the development of learners' comprehension and production of formulaic sequences and their effect on learners' conversational competence in reference to the holistic descriptors set by the ICAO as stated above. The teacher in this test will have to notice the understanding (comprehension) and use (vocabulary, fluency, and interaction) of formulaic sequences and its effect on learners' proficiency level.

CHAPTER SIX Learners' Assessment and Course Evaluation

6.5.1 Defining the EALTS

The EALTS is jointly managed by UK CAA International (CAAi) and Language Testing and Assessment Services Ltd. (LTAS). It is a proficiency test that aims at assessing pilots' and ATCs' English for ICAO compliance. CAAi EALTS Handbook (2012) defines it as:

> The English for Aviation Language Testing System (EALTS) is a multi-level, English for Aviation language testing system designed to assess the language proficiency of commercial flight crew, recreational pilots and air traffic controllers in the context of aviation and aeronautical communications for ICAO Language Proficiency Requirements compliance. The EALTS measures and reports proficiency in the skills of speaking and listening across all levels of the ICAO Language Proficiency Rating Scale from Pre-Elementary Level 1 to Expert Level 6. (P. 2)

The test fulfils the ICAO linguistic requirements and provides a reliable form and method that helps teachers and assessors test aeronautics professionals' language proficiency.

6.5.2 The Components of the EALTS

The EALTS consists of the ICAO Expert Level 6 Assessment (ICAO ELSA) which is for native or near-native speakers. In addition, it includes the English for Aviation Language Test (EALTS) which is for non-native speakers of English and on which we focus in our investigation and designing the proficiency test. CAAi EALTS Handbook asserts that "both components offer appropriate, direct assessments of communicative competence in listening and speaking to the aviation industry allowing organisations to determine the extent to which commercial flight crew, recreational pilots and air traffic controllers are able to meet the ICAO Language Proficiency Standards" (p. 1).

This encourages us to rely on this assessment format as it allows us to meet both the ICAO language requirements for target situation and our main research aim,

which is developing learners' conversational competence. The following diagram draws an overview of the English for Aviation Language Testing System.

EALTS Overview
English for Aviation Language Testing System

Native or near-native speakers of English

Non-native Speakers of English

ICAO ELSA
Expert Level 6 Assessment

EALT
English for Aviation Language Test

ICAO Expert Level 6 Assessment (3)
Duration: not applicable

The ICAO ELSA is non-intrusive assessment of language that does not in the first instance require candidates to undertake a formal examination. Designed to be as non-disruptive to work or training schedules as possible, the ELSA is more a language assessment *event* than a test, assessing language proficiency while candidates interact in the typical communications required in their normal aviation-related tasks or training activities or in the course of an informal but structured interview.

Two trained and certificated EALTS Examiners assess the language proficiency of each candidate and determine if the assessment criteria contained at **Expert** Level 6 in the ICAO Language Proficiency Rating Scale and those contained in the ICAO Holistic Descriptors of operational language proficiency have been satisfied to allow confirmation of ICAO **Expert** Level 6 competency.

In cases where the ELSA is unable to confirm a candidate's proficiency at ICAO **Expert** Level 6, that candidate may be referred to the EALT.

EALT Test of Listening
Duration: Approximately 40 minutes

The **EALT Test of Listening** is a computer mediated adaptive test of voice-only aural comprehension. Test-takers listen to a number of recorded communications. The recordings feature a range announcements and talk-back exchanges typical of aeronautical communications. The communications concern routine and non-routine situations and include a variety of English accents, both native and non-native speaker.

Test-takers demonstrate the extent of their proficiency in the non-collaborative comprehension of the communications through their responses to aural prompts accompanying the communications. Unless otherwise selected by the test-takers, the communications and their accompanying prompts are heard once only.

A test-taker's proficiency in understanding discourse in non-interactive situations is measured against the criteria for the assessment of aural comprehension contained in the descriptors for *Comprehension* in the ICAO Language Proficiency Rating Scale. (4)

EALT Test of Speaking
Duration: 17-20 minutes

The **EALT Test of Speaking** is a direct interview between test-takers and an interlocutor in which the test-takers' language proficiency is assessed across a range of tasks involving both face-to-face and voice only communications

Test-takers and examiners are paired for the purposes of the interview. One examiner acts as an interlocutor/assessor and manages the interaction either by asking questions and providing the task cues for the test-takers. The other examiner acts as an observer/assessor and does not take part in the interaction.

The test contains both individual and collaborative tasks, requiring test-takers to exchange information, to explain, discuss and describe situations procedures and events, to monitor, check, confirm, clarify and report, to negotiate meaning and understanding and to produce extended speech – all within the context of aviation communications and related topics and scenarios.

Test-takers are assessed on their performance throughout the test against the assessment criteria contained in the ICAO Language Proficiency Rating Scale and the ICAO Holistic Descriptors of operational language proficiency.

(3) c.f. ICAO Doc 9835 2nd ed. 6.2.8 Aviation Specific Language Testing Issues and ICAO Doc 9835 1st ed. Ch.6 Aviation Language Testing 6.7.10

(4) In adherence with ICAO guidance, elements of comprehension are evaluated from complementary perspectives in both the EALT Test of Listening and the EALT Test of Speaking. c.f. ICAO Doc 9835 2nd ed. Recommended Criteria For Aviation Language Testing 6.3.2.6

NOTE: The focus of this Handbook is the English for Aviation Language Test (EALT). For further information concerning the ICAO ELSA, please contact: info@ealts.com

Diagram 6.1: An Overview on the EALTS for native and Non-Native Speakers (CAAi EALTS Handbook, 2012, p. 2)

As the diagram shows, the EALTS test consists of two major parts, the listening and the speaking test. The right part of the diagram is devoted to our sample, i.e. non-native speakers. The diagram shows the duration of each test because of the vital role time plays in aviation talk. The diagram also shows different tasks within

each test. The researcher discusses in details each task and its objectives on the following section.

6.5.2.1 The EALTS Listening Test

The EALTS speaking test is the second part of this test. The first, listening test that is a computer based test. Candidates take up to forty minutes for this test; they sit individually using one computer each. The computer is linked to an online server and software granted by the test provided in the UK (United Kingdom). This software generates recordings and questions about the content of these aeronautical communication recordings. The candidate answers the questions by positive, negative, or not stated according to the information on the recording and his/her understanding of the recording content. On this test, the candidate is the only one who will be aware of the question at the end of the test.

Since it is a computer-based test using online software the teacher/ assessor has nothing to do with this test except briefing the candidates about the method of the test and the answering technique. The test provider is the one who grades the answers and send the reports of the assessor. The researcher does not use this part of the EALTS because of a number of motives: first, not all of ESP teachers will have access to this software and the test provider.

Second, ESP classes are not always equipped with such materials such as computers, and software. Lastly, the researcher believes that this test is highly technical with minimal or no plain English occurrence. What interests our research is the occurrence of plain English and non-routine situations to be able to assess the language proficiency and the effect of formulaic sequences on learners' communicative competence. Moreover, this is what the researcher found in the EALTS speaking test.

6.5.2.2 The EALTS Speaking Test

Proficiency tests recognised by the ICAO have to comply to with the organisations' language requirements on an international level taking into consideration different aeronautics' professionals from different linguistic and

cultural backgrounds. Tests such as the RELTA and AELTS (Aviation English Language Testing System) are examples of these assessment procedures. What interested the researcher to adapt the EALTS rather than any other tests is that, and more accurately in its speaking segment, does not contemplate on assessing technical knowledge, but more on the conversational competence and the application of communicative strategies to avoid any breakdown of communication (see 1.5.3 and appendix 12).

The EALTS speaking test consists of three parts as shown in the table below.

Test of Speaking Overview

GENERAL DESCRIPTION		STRUCTURE AND TASKS	
Test Format	A direct face-to-face interview with elements of face-to-face and voice only communications. The interview is audio-recorded. (21)	**Task 1** **Task type and format**	The interlocutor leads the interaction with the two candidates with a series of spoken questions on familiar topic frames drawn from the candidates' own environment of aviation activity. The candidates are asked to demonstrate their language proficiency in short exchanges concerning common, concrete and operations related topics. The topics may include duties, responsibilities, procedures, activities, career, environment and circumstances relevant to the aviation-related context in which the candidates operate.
Timing	17-20 minutes		
№ of sections	3 (with a possibly extended final section)		
Interaction pattern	Two candidates and two examiners. One examiner takes the part of an interlocutor / assessor. This examiner facilitates the interaction: asking questions, instructing the candidates and setting the test tasks. The other examiner acts as an observer / assessor and does not take part in the interaction.	**Focus**	Communicating effectively in face-to-face situations; communicating on common, concrete and operations-related topics with accuracy and clarity.
		Timing	5-6 minutes
Task Types	Short two- and three-way exchanges between the interlocutor and the candidates; a collaborative task between the two candidates; a speaking turn by each of the candidates of approximately 2 minutes duration (with the possibility of a further three-way discussion).	**Task 2** **Task type and format**	Two-way voice-only problem solving exchange between the candidates. Candidates discuss with each other the nature and details of a non-routine incident presented as a radio-telephone communication in a recorded aural (voice only) prompt. One candidate may be nominated to present a brief report in plain English.
Task Focus	Exchanging factual information and describing and discussing situations, procedures and environment in an operations-related context; monitoring R/T communications of a non-routine situation, recognising and resolving potential misunderstandings and negotiating shared understanding; making a verbal report of a non-routine situation in plain English; producing extended speech in relation to a complication or unexpected turn of events in the context of an aviation operations.	**Focus**	Communicating effectively in voice-only situations; using appropriate communicative strategies to exchange messages and to recognise and resolve misunderstandings (e.g. to check, confirm, or clarify understanding) in a general or operational context; reporting communications (gist and details); making a concise oral report.
		Timing	5-6 minutes
Marks	At the conclusion of the live interview the interlocutor / assessor and the observer / assessor, dependent upon their area of professional expertise (LSE or AOE), and independently of each other, award achievement ratings with reference to either the ICAO Language Proficiency Rating Scale or the ICAO Holistic Descriptors of operational language proficiency. The audio-recording of the interview is sent to two remote assessors for them to provide further independent assessments of the candidate's performance. In the event of significant disparity in the ratings submitted, the system provides for the results to be referred to a further two independent assessors and for the process to be repeated until a series of ratings within a prescribed margin of tolerance has been obtained. **NOTE:** Candidates are assessed on their own individual performance and not in relation to each other. **NOTE: AOE** *Aviation Operations Expertise* **LSE** *Language Specialist Expertise*	**Task 3** **Task type and format**	Individual speaking turn followed by questions or comments from the listening candidate. The interlocutor asks each candidate in turn to present a briefing of approximately 2 minutes duration on separate scenarios, each identifying a specific non-routine situation selected by the interlocutor. The candidate is given a cue-card listing a series generalised prompts. The listening candidate is invited to ask one or two rounding-off questions at the end of the speaking turn. At his/her discretion, the interlocutor may extend Task 3 into a discussion of a more abstract nature, based on verbal questions thematically linked to their Task 3 scenarios.
		Focus	Communicating effectively in face-to-face situations; managing the linguistic challenges presented by a complication or unexpected turn of events that occurs within the context of a routine operational situation or communicative task with which they are otherwise familiar;
		Timing	7-8 minutes (including *1 minute* preparation time).

Table 6.4: The Description of the EALTS Speaking Test (CAAi EALTS Handbook, 2012, p. 12)

The first task requires the candidates to speak about their professional experience and answer a couple of questions on common, concrete, and work related topics such as aviation operations and aircraft instruments and their functions. This section takes up to six minutes and the assessor interlocutor should give equal chance for both candidates to speak. In task two, candidates sit back to back to ensure the context of voice only communication and then discuss what they hear during the played recording (recording are cut into three or four parts each).

The recording consists of static noise on purpose to make students communicate, clarify, and confirm any of the information they hear to one another. These recordings are mostly R/T (radiotelephony) communications of non-routine situations where plain English occurs. If there is some time left after the end of the recording, the assessor asks one or both of the candidates for a summary of the whole communication. This part takes up to six minutes as well. The following table presents proper nouns for different airport areas and other references used in the recordings.

EALT Test of Speaking

Task 2: Airspace references and units of measure

Company name	Moonfleet	
Aerodromes/Airfields/Airports	Minster Wareham Longford Keystone	
VORs	MTR VOR WHM VOR LFD VOR KTE VOR	Minster VOR Wareham VOR Longford VOR Keystone VOR
Beacons (+ suffix)	MINTA (NDB) WAREM (NDB) LOFOD (NDB) KESTO (NDB)	(Minster NDB) (Wareham NDB) (Longford NDB) (Keystone NDB)
Air Traffic Service Units	Minster Wareham Longford Keystone	Tower (Planner/Ground/Air) Approach (Departure/Radar) Centre (Control/Area/Radar)

Flight levels, altitudes, heights and elevations are reported in **feet**.
Air pressure is reported in **hectopascals**.
Wind speed is reported in **knots**.

Other references common in aviation operations such as Gates, Stands, Parking Areas, Taxiways, SIDs (Standard Instrument Departure Routes), Reporting Points, Waypoints, Airways, STARs (Standard Instrument Arrival Routes), Military Zones, Danger Areas, Parachute Drop Zones are identified by their **function** and by some appropriate form of alpha numeric designation.

Eg. 'Taxiway C4'; '*Standard Instrument Departure Route* WH27'; '*Airway T2*'; etc.

Table 6.5: Task 2 Support Material for Airspace References and Units of Measure

(CAAi EALTS Handbook, 2012, p. 13)

Finally, in task three, the assessor provides the candidates with unusual circumstances or emergency situations. Each one of them gets his own scenario prepared earlier by the assessor. The latter has to make sure both candidates understand their scenarios well. Then, s/he gives one minute for them to prepare their responses. At the end of the preparation minute, one of the candidates is supposed to read back the scenario then brief the assessor and his colleague on how s/he plans to treat the situation.

Then, his/her colleague asks or comments on anything he says; the same procedure for both candidates. While they provide their responses, candidates can use the following cue card in which the find written prompts to help them build a strong response.

Table 6.6: Task Three Cue Card with Assisting Written Prompts (CAAI EALTS Handbook, 2012, p. 13)

At the end of the speaking test, the assessors thank the candidates for their attendance without offering any indication to the level of their performance or their grades (taken by the assessor observer).

6.6 The Proficiency Test (Formulaicity Related Application)

The teacher follows the same steps but without time limitations at first. It is preferable that the teacher be flexible in terms of timing, and strict technicality. The strictness on both matters increase steadily with each proficiency test. The EALTS

speaking test requires two assessors. One interlocutor (communicates with candidates) and the second, the assessor observer who observes the communication and marks out different proficiency levels following the six holistic descriptors in details. As the assessor interlocutor will not have enough time to communicate and grade at the same time. Thus, he puts the grades holistically at the end of the test.

The time flexibility the researcher recommends earlier may serve the teacher well to be both an interlocutor and an observer assessor at the same time. If the teacher can get assistance from his/her colleagues, to be either observers or interlocutors, this may provide extra help. The EALTS experts require assessors to be either AOE (Aviation Operations Expertise) or LSE (Language Specialist Expertise); thus, ESP teacher as a language expert should administer the test either by him/herself or in cooperation with another expert who is an AOE or a LSE.

What the teacher focuses on in this test is the comprehension and use of formulaic sequences and their effect on learners' conversational competence through the three tasks. However, and as the researcher stated before, it is crucial to never neglect what the test is designed to do in the first place. Learners' general language comprehension and performance includes formulaic sequences and not vice-versa. An operational language level that ensures a successful communication on radiotelephony and eventually flights' safety is what is most central to this whole process.

- **Designing the Questions for Each Task**

i. Task One

The first part of the test is for questions on common, concrete and work related topics. As the assessors record the official EALTS test, the researcher recommends recording the tests to keep track of the learners' development and for future reference.

The teacher begins the test by asking the following question for both learners: what is your job and where do you work? The teacher knows that they are not operational yet; however, opening questions like these can create a comfortable testing environment without getting to technicality directly. In addition, this may help them realise the test process since they are going to sit for it before starting their

professional career and even while operational. The picture below shows how different participants should be seated during the test.

Figure 6.1: The Proficiency Test Physical Context

The following questions must be familiar to learners and within the aviation operations topic frame. Aircraft components, instruments, functions, phases of flight, checklists, and training programmes are all topics to be considered designing Task One. As far as formulaic sequences are concerned, the teacher will be paying attention to the use of these formulae within students' responses and notice the effect of these prefabs on their fluent speech.

- *The Sample*

Before launching the test, the assessor first provides a description of the three tasks and answers any of students'/candidates' questions; then, makes sure there is no noise and instructs candidates to turn off their phones or any other electronic device as the interview will be recorded for further analysis and assessment. After allowing candidates to settle down and be at ease, the teacher/assessor begins the test as follows:

- Good morning/afternoon/evening, can I confirm your first names please, (the teacher asks for their names to tag the latter with their voices later on when needing to play the recording for further analysis/assessment).
- The teacher makes sure to keep tagging respondents with first names.
- The teacher advices candidates to ask for clarifications, repetition, and confirmation in case of misunderstanding, and assures them that this would not affect their grading in any way.

The following are a set of possible questions to ask:

The teacher: In this first task, I would like to learn something about you and your area of aviation operations (students might have different training purposes "commercial or recreational piloting for instance", or be already operational, thus questions will differ accordingly).

- What is your job and where do you work?
- What is your area of aviation operations?

The teacher here asks further questions related to the students' responses for the first two questions (depending of their aviation operations/training).

- <u>If candidates are still on training:</u>

- Have you had an English language test like this before? If yes, how did it go?
- Why did you decide to be an aircraft pilot?
- What type of training are you taking currently? Please elaborate.

- How many flight hours do you have up till now? On which aircrafts/simulator?
- Would you please describe your first solo flight?
- What are your personal objectives in aeronautics?
- What is the aircraft you prefer to operate on in the future? Why?
- Would you please cite some of the instruments on this aircraft?
- What is the function of this instrument (ex: altimeter)?

- If candidates have been or still operational:

- How many flight hours do you have up till now?
- How many aircrafts have you operated on?
- On which aircraft?
- Would you please cite some of the instruments on this aircraft?
- What is the function of this instrument (one of the mentioned instruments)?
- Please describe what is a pre-flight check?
- Would you please cite some of the checklists and their purpose?
- What is the function of the DME (Distance Measuring Equipment)?
- What is the difference between a conventional and a glass cockpit?

The teacher thanks the candidates, closes the first task and introduces the second task.

ii. Task Two

In this task, the teacher must make sure that both learners are seated back to back in order to ensure the voice only communication without the interference of any paralinguistic features of language that may provide extra information. This back-to-back situation will comply with the target situation where the pilot and the ATC are not visible to one another. The next picture illustrates how learners and the assessor(s) should be seated.

Figure 6.2: The Sitting Position the Learners Take on Task Two

The students listen to an R/T communication that is divided to three or four parts, the recording is short (approximately 1:30 seconds) and provided by the academy, each time the teacher pauses the recording; s/he nominates one of the learners to begin the discussion with his classmate about what they have heard. Here, the teacher does not interfere and gives the chance for students to ask, report, exchange, clarify, and confirm any of the details they hear and must make sure every detail is accurate.

In case both of learners are not sure of a specific detail, one of them asks the assessor to "say again" and specify what piece of information needed, for example, say again problem, say again pilots one, say again ATC, or even specific details like altitude or cause of incident.

The teacher here, pays attention to formulaic sequences used appropriately is exchanging information, clarifying, asking for information and other related language functions where formulae are used. It is imperative, as well, to make sure learners are using the expressions accurately without making their classmates confused, and if so, what does the learner do to clarify. At the end of the recording, and if learners are quite sure they have all the important details, the teacher nominates one of them to share a short report of the whole communication; and it is usually the one who spoke less during the task.

- ### *The Sample*

The teacher introduces the second task by asking students to turn their chairs back to back to ensure voice-only communication exactly as the target situation requires.

Afterwards, the teacher informs students that s/he will play the recording once only and recommends taking notes as they listen. S/he adds that after each played part of the recording, they are asked to talk about what they have heard, reporting, clarifying and confirming until they are satisfied that they have understood all the details.

Additionally, the teacher advocates students to ask him/her to "say again" or "confirm" any detail, but only if both of them are unable to check, clarify or confirm the information on the recording. The teacher has the script in front of him/her to read back the requested piece of information since the recording is,(as previously stated) , played once only.

At the end of the second task, when both candidates are satisfied with what they have acquired, the teacher asks one of them to provide a short summary of the whole communication as a report (usually it is the one who spoke less during the test. If both participated equally, the teacher asks both of them to report the communication).

The script:

The teacher: this communication is between an air traffic control centre (ACC) and a pilot of a fixed wing aircraft (ACFT). The phase of flight is on cruise. You will

hear the proper nouns: Keystone that is the (ATSU) air-traffic service unit, and Moonfleet, which is the airline company name. Are you ready? This is the first part of the communication:

ACFT: Keystone Centre, Moonfleet 844. We have been intercepted by a military aircraft…correction, now by two military aircraft. We have one flying alongside to starboard. I have lost visual contact with the second. It could be above or behind us.

Pause: the teacher asks one of the students to start reporting the information, checking and clarifying with his classmate. S/he should not forget to keep tagging the students by name for further analysis or assessment purposes using the recording.

The teacher: the situation continues.

ACC: Roger, Moonfleet 844. The aircraft are not transponding. You are very close to restricted military airspace at the moment. Suggest you turn north.
ACFT: Moonfleet 844. Roger. The pilot of the military jet to starboard is pointing to the north also. I am turning away now

---

Pause: the teacher asks one of the students to start reporting the information, checking and clarifying with his classmate. S/he should not forget to keep tagging the students by name for further analysis or assessment purposes using the recording.

The teacher: the situation concludes.

ACC: Roger, Moonfleet 844. Continue turn and confirm new

heading.

The following is another script of the recording.

ACFT: Longford Tower. Helicopter BD, at the VIP lounge, ready for departure.

T-AIR: Helicopter BD, Longford Tower. At the

VIP lounge, cleared for take-off.

ACFT: Cleared for take-off, Helicopter BD.

The teacher asks one or both students to provide a short summary of the whole communication. Finally, s/he asks students to face him/her back again, concludes the second task, and starts the third.

iii. Task Three

The last task is the most challenging one for both learners and the teacher as well. The former are confronted with scenarios of unusual circumstances or emergency situations in the form of incidents. The teacher can use any scenario s/he sees appropriate to the unit content previously taught. In addition, using other sources like the phone application Aviation Herald Reader (AVH) can be of great help as it provides up to date incidents and news on unusual circumstances (see 5.12.2).

Learners are supposed to go through the procedures they learnt as far as their specialty is concerned, and to makes sure to ask and share accurate data using plain English to manage these situations. The prompts we mentioned earlier might be of a great help for learners organise their responses.

As for the teacher, s/he is supposed to listen to learners' responses carefully and pay attention to their language production accuracy is general and formulaic sequences used in particular since each student will have two minutes for their response and this is the longest period of time they use for speaking during this test.

What is mostly significant in this task is the learners' ability to manage successfully unexpected events is a short period of time using very accurate language and providing more accurate information. Formulaic sequences are of great help in this situation and the teacher will be paying attention for using them especially using connectors and discourse markers to avoid awkward silence and confusing fillers; additionally, to ensure a smooth, accurate and a fluent speech by learners during such critical situations.

- *The Sample*

In this third task, the teacher provides students each with a scenario of an unusual circumstance or an emergency situation where they have one minute to think about their responses and two minutes to read them to their classmate, the latter is supposed to ask a question or comment on anything he heard. The same goes for the second candidate / student. The students follow the prompts card given by the teacher (see 6.5.2.2).

The teacher tailors the scenarios according to the candidates'/students' operational circumstances and activities. The following are a set of unusual circumstances and emergency situation designed by the researcher where plain English is required and formulaic sequences may occur.

Scenario One:

You are flying from London to Algiers; while entering the runway for take-off, you experience a total failure of engine one.

Scenario Two:

You are flying from Biskra to Paris; while on cruise, you lose control of your aircraft because of a complete failure of the ailerons.

Scenario Three:

While preparing to land at Tlemcen Airport, you notice that there is an ice contamination on the runway.

Scenario Four:

You are flying from Oran to Moscow. While en route; you observe number two hydraulic pressure decreasing. In few minutes, the pressure drops to 20%.

Scenario Five:

You are flying from Hassi Messaoud to Constantine, while on cruise, you experience a severe turbulence and your co-pilot gets injured and looses consciousness.

Scenario Six:

You are flying from Annaba to Rome, while on cruise, unlawful passengers try to hijack you airplane.

The teacher mentions the departure and arrival points (airports/ towns) so students can take into account all of the conditions related to their aviation operations such as weather conditions expected at the destination's airport and different areas of the aerodrome such as the length and condition of the runway that may affect the landing procedures for instance.

6.7 Proficiency Test Limitations According to Hutchinson and Waters

In this part, the researcher discusses then endeavours to respond Hutchinson and Waters concerns over the limitations of proficiency tests in ESP. It goes without saying that assessment in general and proficiency tests, as a part of it, is an important part of ESP process. Hutchinson and Waters (1987) confirm "yet although specific language proficiency tests seem to be a logical extension of ESP principle, they remain problematic". (p. 150)

First, they believe that since proficiency tests are criterion-referenced, it is a problem identifying the criteria to be taken into account; the variation of these criteria according to the subject area, and what skills and language knowledge is required for a particular task. In this study, the researcher makes sure to spotlight and elaborate the different criteria taken into consideration to design different types of assessment; and kind of language needed by the learner.

As for language knowledge and skills, there are particular skills required for aviation operations and the language knowledge is on (appendix 06). This table allows us to make sure we, as teachers, to link the language requirements to the target situation in order to enable learners to perform adequately. Real life tests as Hutchinson and Waters propose as a solution to rely on especially on the designed proficiency test, task two and three is particular.

The second concern Hutchinson and Waters consider is the specificity of these tests as far as the audience is concerned. They argue the possibility of administering an engineering test and be a valid indicator for all engineering branches like marine, electronic, civil, electrical, mechanical, aeronautical, etc. In this study, the researcher is more concerned with pilots and ATCs as aeronautics' professionals.

The two types involved in aviation operations share the same background knowledge related to the researcher's main concern, which is radiotelephony communications. Moreover, both of parties share the same language requirements to perform adequately while operational. Finally have common and similar task aim that is accurate message delivery and reception on specific matters using radiotelephony to ensure every flight's safety. Thus, the researcher believes that the proficiency test suggested might be specific and has a specific audience and aims.

This section aims at drawing the reader's attention towards Hutchinson and Waters concerns related to the proficiency tests; and why they do believe the tests are yet problematic. The researcher tackles this subject and endows with an attempt to relate the scholars' concerns to his findings and perspective on the subject matter. On the same train of thought, he endeavours to clarify his suggestion in order to enable learners to perform necessary communicative tasks more accurately especially in the research's field of interest.

6.8 Course Evaluation

Course evaluation is a general concept that refers to assessing the courses' fulfilling of the intended needs. In other words, evaluating a course is an organised process performed by the teacher. S/he uses different techniques and/or expertise to judge the effectiveness of the teaching/learning experience. This goes through the fulfilment of a set of course objectives or, what the course is designed to do in the first place.

Alderson and Waters (1983) assume four aspects of ESP course evaluation to consider:

a- What Should be Evaluated?

The (what) in this respect is answered briefly as everything related and significant to the course. Hutchinson and Waters (1987) confirm that course evaluation is concerned with assessing the satisfaction of both students' needs as language learners and users. They propose the following questions to begin the inquiry:

- Is the course fulfilling the learners' language *learning* needs?
- Has the course fulfilled the learners' language *using* needs?

The course designer or the teacher will find him/herself facing two options, either the answer is "yes" on which we can label the process as successful. Alternatively, no, and in this case the teacher has to go through another phase of identifying the gap in the course design that stands between its designed aims and their fulfilment.

The teacher has first to identify where things went wrong; i.e. what areas of need are not being/ have not being fulfilled? What comes after is much more challenging for the teacher; s/he has to identify the source(s) of the problems following a set of questions developed by Hutchinson and Waters:

- Were the unfulfilled needs identified during the course design process? If not, why not?
- How can the course design process be improved to avoid this problem in the future?
- How can the course be changed to take these needs into account?

- Finally, if these needs were identified during the course design process, why are they not being/ have they not been fulfilled?

These questions will pave the path for the teacher to evaluate the course in case it did not serve what its purpose. According to Hutchinson and Waters, the teacher may find the gap in one of the following:

- The syllabus (es),
- The materials;
- The teaching and learning techniques;
- The testing procedures;
- Logistical/ administrative arrangements;
- The course evaluation system? (*ibid*).

As these are the main sources of "gaps" that may prevent the course from reaching its aims, it remains possible that the gap is not in the (what) but rather in one of the other important layers of the course evaluation that follow.

b- How Can ESP Courses Be Evaluated?

Hutchinson and Waters (1987) and Robinson (1991) suggest a number of techniques the teacher can use for evaluating everything in relation to the designed course; in addition to test results, there are questionnaires, interviews and discussions with learners or educators, learners' chats and comments, and checklists. These techniques vary between formal and informal means of evaluation.

What marks out suitable means of evaluation used by the teacher is relatively linked to his/her teaching situation. Hutchinson and Waters (1987) summarise the following steps that elaborate how the teacher must evaluate ESP course:

- Gathering the evaluation information;
- Collating the information, and summarised if extensive;
- Discussing outcomes with all interested parties;
- Drawing conclusions;
- Providing a detailed course evaluation report for further suggestions and discussions. (p. 154)

Thus, it is worth noting that the course evaluation is an organised complex process; so, it would be better to follow the steps and make sure the application is as accurate as possible. What comes next is mentioned in this section as interested parties, so who should be involved in the course evaluation process alongside the teacher?

c- Who Should be Involved in the Evaluation?

A larger amount of information and perspectives is considered useful in this situation; especially if experts or any individual with a related background knowledge and experience provides them. Hutchinson and Waters (1987, p. 154) confirm by stating, "It is important to get a representative cross-section of views and to take them properly into account". In ESP, learners, former students, sponsors, teachers, and ESP teacher him/herself are the main participants involved in the process regarding their involvement with the operation.

Positive feedback is not a guarantee if these participants are not well considered. Their degree of involvement, interest, and concern may affect their views and responses. Learners, for example, may think the evaluation has an effect on their assessment or grading; accordingly, they will not provide accurate feedback. Waters (1985) proposes orientation exercises to help students be accustomed to expressing their perspectives more honestly and candidly (*ibid*). Furthermore, it is of great interest for the teacher to keep an honest trusting relationship with his students to ensure their openness and positive feedback when asked.

Conjointly, since what means you use and from whom you get the responses will definitely affect what you get (*ibid*), taking care of every statement and provider of the statement is highly recommended for a better judgement as well.

d- When and How Often Should Evaluation Take Place?

The timing of the evaluation is definitely a key factor of the process success. Hutchinson and Waters (1987) advice teachers and designers to have a balanced frequency of evaluation; in more precise terms, not too often and lose the quality of

participants' responses, and not too rare to risk having an inaccurate teaching/learning process that leads nowhere intended, i.e. not fulfilling the course objectives.

They suggest the following as the most important times for evaluation:

- In the first week of the course, as initial impressions may provide more accurate data than later ones;
- At regular periods throughout the course, every half term for instance;
- At the end of the course;
- And finally, if possible, after the course, which they characterise as the most valuable period since the learner will be in a suitable position to provide accurate judgements on how well the course studied will be of help for the target situation they are in currently (p. 155).

To sum up, the evaluation procedure is a very challenging and complex process. It can be a time-consuming, complex, and frustrating (*ibid*). Thus, patience and care are highly required by the teacher in order to obtain accurate data and enhance the course's quality.

6.8.1 Practical Implications on Course Evaluation

In this part, the researcher suggests a number of steps for evaluating the designed course based on Hutchinson and Waters' perspectives. The course evaluation procedure is a complex process and requires patience and care in order to apply all the steps and obtain accurate data, and eventually ensure fulfilling course's objectives.

The researcher makes sure to evaluate all the materials. The teaching content and method are of high importance and need to be as accurate as possible. To be more specific, the subjects tackled and the types of exercises used will be the main focus during the evaluation process. Moreover, following the lexical approach is a successful teaching method by the researcher; however, the teacher is required to evaluate it in order to secure the accuracy of the teaching/learning environment and students' language learning needs.

Both teaching techniques used, shadowing and dictogloss are better evaluated using a language experts' responses. The teacher has to make sure formulaic

sequences are well comprehended and accurately used, and evaluating the techniques used to make that happen is critically important.

As we discussed what we should evaluate, it is time to highlight the means to use for evaluating the course. As stated above, there is a variety of means and they depend on what the teacher believes would suit his/her teaching situation best. In this case, the researcher suggests using group and individual discussions; in addition to informal means such as informal interviews and chats. The researcher believes that unstructured and informal means will facilitate participants' integration in the process and afford comfort, which will positively help the teacher getting encouraging and accurate data.

Selecting the participants on which the teacher will depend and on their responses is not a simple task. The teacher risks to be taken as incompetent by the learners when consulting materials' quality with them, and even get contradicting feedback from different parties as Hutchinson and Waters (1987) explain. Thus, the researcher recommends the assistance and selection of a variety of participants, relying on students, ESP teacher, aviation English experts, and EALTS assessors.

After all, the researcher believes that course evaluation is an important aspect of ESP process in general. The evaluation periods he suggests are the following. First, at the end of the first week, in order to have a concise idea on learners' perception of the teaching content and method as first impressions are more likely to be accurate; more precisely, to have an idea about the effect of formulaic sequences on learners' conversational competence and fluency in relation to the target situation requirements (course aims).

Second, regular intervals across the course will reveal data that are more accurate. As far as both learners and other participants. Because of the continuity of the process as well. Finally, after the course, the evaluation is useful since learners will be in their target situation and in a better place to judge the course. As a result, what matters more than different periods of evaluation is keeping a balanced frequency of evaluation with the intention of ensuring the quantity and quality of responses.

6.8.2 Pre-Implementation Perspectives on the Designed Course

The researcher shares a number of perspectives collected through informal means of evaluation such as unstructured interviews and chats. These responses come as speculations about the non-implemented designed course. First, the researcher discusses the course content and method with ESP teacher, she believes that formulaic sequences provide great help for learners to develop their pragmatic skills and vocabulary vessels. As for teaching methods, she believes that they are quite accurate and may fit into teaching aviation English.

Second, the EALTS assessors (two), showed interest and thought of formulaic sequences as a valid indicator of learners fluency. They believe that the **accurate** use of formulaic sequences within the EALT speaking test allows learners to get higher grades and be considered communicatively competent. In addition, they have stated that formulaic sequences will help learners develop their plain English that is highly required in non-routine situations.

Finally, the Aviation English expert was the first to endorse the researcher's interest and suggest the use of the lexical approach to teach formulaic sequences to future aeronautics professionals (pilots and ATCs). He believes that plain English is vital to successful radiotelephony communication and thus, flight's safety. He adds, since formulaic sequences help EFL and ESP learners' communicative competence, it is helpful to encourage the acquisition and use of formulaic sequences for non-native speakers of English to develop their language proficiency and more precisely, fluency, which is as far as I know, highly recommended in aviation talk.

These are viewpoints the researcher collected from a number of participants involved in the process. These pre-implementation ideas might not be accurate enough; however, they provide an encouraging set of sights from well involved individuals.

6.9 Conclusion

In this chapter, the researcher discusses both kinds of assessment, learners' assessment and the evaluation of the course. He outlines both of them in theory and practice elaborating the application of both types in accordance to the field of study

and target situation linguistic requirements. The researcher notes that learners' assessment and course evaluation cannot be isolated. Both are used interchangeably and are quite interrelated, as they aim at providing useful data to develop the teaching/learning experience and enhance the quality of the course in order to help the learner use the skills covered during the lessons both in terms of usage and use.

The feedback the teacher gets from both types of assessment will not only provide data of what is still unknown by learners, but also helps designing better content to cover those lacks (learners assessment). This will eventually lead to a gratifying content and teaching method. Course evaluation gathers all those who are involved in ESP process for the mere reason of creating a satisfactory course since the nature of ESP ensuring the satisfaction of needs.

GENERAL CONCLUSION

General Conclusion

The importance of the English language keeps increasing in all fields, as it is a solid means of integration and development. In aviation, English has been the official language used for international flights communication via radiotelephony for over a decade now. The ICAO as the main authority for everything in relation to the civil aviation system keeps focusing on the importance of English language proficiency through specific linguistic requirements for non-native speakers in particular.

As comprehension and fluency are among the main holistic descriptors for learners' and operational aeronautics' professionals proficiency, it is key for non-native speakers of English included in the aviation business to be proficient enough to not be a part of any breakdown of communication and especially on radiotelephony.

There is an acknowledged importance of the English language in aviation by the aeronautics' community in Algeria. However, little if no actual effort is done to improve the status of the language in this field or start acting accordingly and provide solutions to develop learners' proficiency. The English language in the Algerian aviation system is nothing more than a must (theoretically) and as a necessity for the ICAO standards. The secondary status of the subject has led professionals to face difficulties communicating on international airspace.

The main concern of this research is the implementation of formulaic sequences within the developed and adapted course. The researcher relies on Hutchinson and Waters' model of course design to develop suitable materials and satisfy learners' target and learning needs. By getting back to formulaic sequences as a main aim of this research, the researcher argues the importance of formulaic language for EFL learners in general and ESP learners in particular. He draws a relation between prefabricated chunks of language, their nature, and functions to the linguistic requirements stated by the ICAO for a more proficient level or more precisely, an operational level at lease as they put it.

GENERAL CONCLUSION

The researcher also put a frame and limited the types of formulaic sequences aviation professionals will need. As stated in chapter one, not all formulae are required by ESP learners and only a number is suitable enough to develop their communicative competence. What is most important is that the researcher has provided proof that helps realising the importance of formulaic sequences and their holistic nature in addition to their relative figurativeness to the aviation talk and the occurrence of such formulae especially in non-routine situations. Finally, the researcher has provided a number of materials to help teaching formulaic sequences; furthermore, a number of methods and techniques that suit teaching aviation English and accordingly implementing formulaic sequences. The researcher reached these objectives through several steps summarised next.

The first chapter of this research attempts to shed light on ESP and provide a theoretical framework that helps the reader and other researchers understand the field of study the researcher discusses. Additionally, the researcher details different steps taken in this procedure as a whole. More importantly, the needs identification and analysis in relation to the course adaptation procedure. Most importantly, the researchers' attempt at drawing a link between the identified needs and adapting them into a suitable set of materials and methods that form the curriculum and fulfil both learners' target and learning needs. The second section discusses aviation English and the ICAO language requirements. The researcher relates this to ESP and aviation situation in Algeria.

The second chapter is devoted to the study of both dependent and independent variables. Its first section discusses formulaic language. Moreover, data on what research has come up with so far in this field of study. The different types and functions of formulaic sequences in addition to their nature, acquisition and use have a fair share in this chapter. The researcher finishes this section by relating formulaic sequences to aviation English and phraseology. The second section deals mainly with communicative sequences and their relation to aviation talk. Besides, the researcher discusses several communicative strategies that may help pilots and air traffic controllers in communicative difficulties/challenges to avoid any type of breakdown of communication.

GENERAL CONCLUSION

The third chapter provides a situation analysis and focuses more on the research methodology. It discusses the state of the English language in the Algerian aeronautical system taking Aures Aviation Academy and their candidates/trainees as a sample population. The researcher provides detailed data on the academy, ESP course, the trainees, the instructional/administrative staff of the academy. Moreover, the researcher puts a theoretical frame on the research approach followed and both research instruments and techniques used without stating a rational for the choices taken. After, the researcher discusses the fieldwork procedure for each instrument with limitations faced.

The fourth chapter presents the learners' needs taxonomy. The researcher here identifies learners' needs through the analysis of the collected data. He pays attention to every detail provided by respondents in order to make sure the data are as accurate as possible for successful needs identification. The results show the importance of listening and speaking in aviation talk through radiotelephony.

However, and even if learners were aware of the ICAO language requirements and the importance of English in aviation, they were not well aware of the specifications of these requirements. Students need to reach a certain degree of proficiency that they do not recognise yet. As far as their language lacks are concerned, fluency and accurate comprehension were the main difficulties learners face. As for their wants, they were scarcely related to the ICAO linguistic requirements, even if they did not provide thorough information, learners were familiar with the language skills needed and wanted to develop their speech fluency more.

The fifth chapter summarises an attempt of ESP course adaptation. Before that, the researcher creates a synopsis of the learners target and learning needs identification that the researcher takes into account for ESP course adaptation. He also proposes techniques of implementing formulaic sequences into the designed materials and devoting a session as an entry to formulaic language where he suggests a number of activities on types and acquisition of formulaic sequences.

The researcher provides a detailed clarification of phraseology and plain English and their occurrence on the curriculum. The second part of the chapter

provides information on the structure of the teaching units with more focus on fluency and listening comprehension. Moreover, the researcher discusses, in details, teaching techniques, material and topic selection, and the main objectives of the designed units. Finally, the researcher provides a number of sample units to show the smooth flow of the syllabus, the accuracy/relation of selected topics, and the efficacy of the selected/designed materials.

The final chapter deals with learners' assessment and course evaluation. It represents one of the most important steps of ESP course design. The researcher discusses both the theoretical and practical part of this crucial step and its significance for the success of the fulfilment of the target and learning needs. In this chapter, the researcher also debates three types of tests: placement, achievement, and proficiency tests from both theoretical and practical perspectives. The researcher adds, at the end of each test description, a designed sample. He also focuses on the main three holistic descriptors set by the ICAO for proficient language learners, which are comprehension, vocabulary, and fluency. He chooses these three because of their close relation to formulaic language. The latter is a major factor that affects learners proficiency as the researcher found. The second part of the chapter discusses the EALTS as a proficiency test recognised by the ICAO. The researcher relies on this test to design the proficiency test and ensure the efficient and quality testing for learners.

Finally, course evaluation is explained based on Hutchinson and Waters perspective as the researcher used ESP teacher's and aviation English expert's views on the work and the designed materials/tests to have a pre-implementation perceptions on the designed course as a preliminary evaluation.

It is worth mentioning that the results obtained throughout this investigation are not to be generalised and the researcher recommends counter investigations and more substantiation of the chosen research methods and the obtained results. The cause behind this is the research limitations encountered such as the limited number of participants and the lack of balance between the pilots and air traffic controllers. This study deals mainly with student pilots taking their training at Aures Aviation

Academy and a very limited number of novice air traffic controllers (5). Thus, the results cannot be generalised for all Algerian aeronautics professionals.

Accordingly, the researcher encountered difficulties with the availability of the participants generally, and instructors and administrators in particular. This has caused several issues for the data collection procedure as it too more time than planned. In addition, this has been a challenge for the researcher to investigate more in order to understand aviation English since most of aviation professionals in Algeria prefer using the French language in instruction and while operational. In order to overcome these difficulties, the researcher used more research instruments and had an aviation English teaching and assessment training by English experts in this domain to collect accurate data and ensure the feasibility and validity of the study.

Because of the importance of successful communication in insuring every international flight's safety, the researcher believes that future investigations need take-place and they are required to improve the communicative skills of aviation professionals in Algeria. It is imperative to put a practical implication to this study, teach the designed content, and apply the proposed strategies that the current investigation did not follow up because of time restrictions. Future research on formulaic language and its effect on ESP learners' target situation requirements by investigating different case studies from several domains is highly required as well especially within fields where oral conversation competence is necessary in target situations.

To sum up, aviation English in Algeria needs the collaboration of all stakeholders in order to be able to say that we fulfil the ICAO linguistic requirements for the learners. Collaboration between ESP teachers and subject specialists is a necessity now more than ever taking into consideration what the breakdown of communication in aviation may cause. The researcher proposes formulaic language teaching based on his studies and perspectives and based on its relation to certain effective factor is aviation talk such as timing. He tries to focus on the matter because if its importance and catastrophic outcomes in case of any wrong turn of events.

All the materials selected/designed, topics chosen for the syllabus, teaching approach adopted, teaching methods and techniques used, and tests designed serve

more precisely the fulfilment of ICAO language requirements to avoid any breakdown of communication and ensure safe flights. Also, to make sure pilots and air traffic controllers have a good command over plain English as well especially for non-routine situations as the chosen topics and the proficiency test shows.

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APPENDICES

List of Appendices

Appendix 1

Students Questionnaire

Good day, we are currently conducting an investigation for the sake of showing the importance of formulaic sequences and their effect on the communicative competence of English language speakers within the field of aeronautics in Algeria. We would like you to help us by answering these questions thoroughly.

Hello! How are you today?

....

A/ General Questions

1- Sex:

Male   ☐

Female   ☐

2- Age: ………

3- What is your English language proficiency?

 -Beginner ☐   -intermediate ☐   -advanced ☐

B/ Students' English Language Background

1- For how many years have you studied English language?

- Middle School (…..)

- Secondary School (…..)

- University (…..)

- Other (…..)

- Did you have or are you having other English language courses after you finished secondary school?

Specify please

……………………………………………………...

2- What was/is the nature of these/those courses?

General English   ☐

English for aviation   ☐

Others (specify please) …………………………………………………..

3- Does English help you in your studies? How?

………………………………………………………………………….

C/ Students attitude towards ESP session

1- Do you think English language is important for you?

- No ☐

- not very much   ☐

- important   ☐

- very important   ☐

2- Do you think that this course is important for you?

Yes ☐   No   ☐

- Why

………………………………………………………………………………………

…………………………………………………………………

3- To what extent are you satisfied with the course content?

- 25% ☐   50% ☐   75% ☐   100%   ☐

- Justify please: …………………………………………………………...

4- Do you attend the English language course regularly?

- Yes ☐   No   ☐

- Why …………………………………………………………………..

5- Do you participate in your class activities?

- Yes ☐   No   ☐

- Why …………………………………………………………………

6- What are the difficulties you face in the English language?

- To write reports   ☐

- To read aviation documents and books   ☐

- To speak with classmates or instructor   ☐

- To listen and understand native speakers taking about aviation   ☐

- Other …………………………………………………………..

7- What are the reasons which keep you from mastering the language?

- Lack of practice in and outside the classroom ☐
- Insufficient period of instruction ☐
- Lack of reading ☐
- Lack of interest ☐
- Others specify …………………………………………………
8- Is the time allocated to the English language session sufficient for you?

 Yes ☐ ☐

- If not, how many hours do you suggest ………………………...……

D/ Students' Target Needs

1- Where do you use English?

The internet ☐

Books ☐

Interacting with people ☐

Others (specify) …………………………………………………

2- Do you have the motivation to learn English?

Yes ☐ No ☐

Why? …………………………………………………………

3- Please classify these language skills according to the importance they present to you.

- Grade them from 1 to 4.(start with the most important)

Listening comprehension ☐

Speaking ☐

Reading ☐

Writing ☐

4- What do you want to learn exactly in English? Why?

………………………………………………………………………………

……………………………………………

APPENDICES

5- Are you aware of the language requirement instituted by the ICAO that states that the English language is the International language of aviation?

Yes ☐ No ☐

6- With this requirement, do you think English is essential for you? Why?

……………………………………………………………………………………

………………………………………………

7- Do you want to add any suggestions?

……………………………………………………………………………………

………………………………………………

We appreciate your help, Thank you.

Appendix 2

Subject Specialists Questionnaire (Teachers of Specialty, Instructors and Administrators)

Salam, we are currently conducting an investigation for the sake of showing the importance of formulaic sequences and their effect on the communicative competence of English language speakers within the field of aeronautics in Algeria. We would like you to help us by answering these questions thoroughly.

Hello! How are you today?

....

1- Would you please state your qualification(s)?

- Licence- Master- Doctorate- Other (specify please).

- ……………………………………………………………………………… ………………………………………

2- Your status in the institution:

……………………………………………………………………

- What do you teach/ what are you responsible of in here?

……………………………………………………………

3- Have you worked in an airport before?

- If yes, what position did you occupy and for how long?

………………………………………………………………..

3- How many languages do you speak fluently?

- Arabic ☐
- French ☐
- English ☐
- Other ………………

4- What is your English language proficiency?

-Beginner ☐   -intermediate ☐   -advanced ☐

5- What kind of English language courses you had?

- General English   ☐

- English for aviation   ☐

- Others, specify please:

    ……………………………………………………………….

6- Where did you have these courses and for how many years,

    ……………………………………………………………

7- What language do you use in communications required by your occupation?

(Paper work …………………………………….….…)

(Meetings …………………………………………)

(Conferences ………………………………………..)

(International seminars or conferences………..…….)

(Web search……………………………………..)

8- (For teachers only). Do you use English in teaching your subject? How?

……………………………………………………………………………………………

…………………………………………………

9- Should all teachers use English in their sessions or course of instructions? Why?

……………………………………………………………………………………………

…………………………………………………

10- Do you think the English language teachers and subject specialist can

collaborate for the sake of students' improvement? How?

……………………………………………………………………………………………

…………………………………………………

11- Do Aviation students have to learn English language? Why?

……………………………………………………………………………………………

…………………………………………………

12- Is the course they have in this institution enough?

Yes ☐   No   ☐

Justify……………………………………………………………..

13- What language skill is more important for aviation students in your opinion?

Listening   ☐

Speaking   ☐

Reading   ☐

Writing   ☐

14- Are there any advice or recommendations you want to add concerning the

English language learning and you area of expertise?

…………………………………………………………………………………

………………………………………………………

We appreciate you collaboration.

Appendix 3

Aviation Professionals Interview
Pilot & Air Traffic Controller

Good day, we are currently conducting an investigation for the sake of showing the importance of formulaic sequences and their effect on the communicative competence of English language speakers within the field of aeronautics in Algeria. We would like you to help us by answering these questions thoroughly.

Hello! How are you doing sir?

……………………………

1- Can we know in which specialty you have carried out you tertiary studies and your current position please?

2- What is your proficiency level in English?

Beginner () Intermediate () Advanced ()

- What are the reasons behind that situation?

3- What does English language represent to you?

4- How often do you use the English language?

5- In your working context, are you faced to situations in which English language is used?

6- Where do you use English language? (Communications, conferences, face to face conversations)

7- Have you spoken to any native speakers within the area of your expertise? If yes, have you encountered any obstacles in understanding their speech? , how exactly?

8- Are you aware of the ICAO phraseology? If yes;

How well do you master it?

Where did you study it?

9- Native speakers use many formulaic expressions in their speech. (After explaining the notion of formulaicity) is that what you do not understand when you speak to them?

Some examples:

Plain English: We are on the same wavelength, on the same train of thought, cut to the chase, I don't want to beat this to death but …

Aviation English:

Push the envelope (try something to the limits)

Mind numbing,

Controller to pilot: Taxi into position and hold.

10- After the announcement of the ICAO that English has become the official language of aviation around the world and its professionals should reach fluency (alongside to mastery of ICAO phraseology) , do you think that the lack of English language proficiency presents a hurdle for your professional career? How?

11- Have you ever been in a critical situation when the cause is the breakdown of communication or misunderstanding?

- How was it and how did you act?

12- According to your experience, do you have any suggestions and recommendations on the academic education for the future aviation professionals?

Appendix 4

ESP Teacher Interview

Good day, I am currently conducting an investigation for the sake of showing the importance of formulaic sequences and their effect on the communicative competence of English language speakers within the field of aeronautics in Algeria. We would like you to help us by answering these questions thoroughly.

Hello! How are you doing today?

Informative Questions

1- Would you please state your qualifications and teaching experience?

Educational background (qualification)/ Teaching experience/ teaching ESP.

- Have you had any kind of ESP training?

GE & ESP Course at Aures Aviation Academy

1- Can you give us a brief introduction on how English is taught in here?

2- Do you think the policy of the school towards English is suitable for your students and others in this field?

3- What is the status of English at your institution? (primary or secondary)

ESP Course Information

1- Are you provided with any teaching materials by the school? Frequency of use, and satisfaction.

2- When you joined Aures Aviation Academy, was the syllabus provided by the institution or you have created/chose it according to your past experience/ or you conducted a needs analysis and realised that this programme is suitable for these students?

3- First I want to know if there is a special time table you follow during the whole year. Of course as far as the English language session is concerned, do you think the different planning of the session is satisfactory for you and for your students?

4- Is the time allotted to English reasonable or not?

5- You mentioned a learning process that students go through, 30 hours per level and there are exactly eight levels of general English (new interchange series). Students should succeed in all levels, while those who don't should take a makeup test/exam. Please confirm the above info if correct.........

6- After the general English sessions, students get level 8 so they can move to ESP session since the previous sessions were just for general English. Using McMillan English for aviation, are students provided with this ESP session at Aures Aviation Academy or elsewhere? Please elaborate.

7- What kind of teaching method and techniques are most suitable for teaching English for Aviation? Which one do you follow currently

8- Do you prefer mentioning the objectives of the session for your learners?

9- What kind of activities do you rely on mostly?

10- What is your students' attitude towards English language?

11- Are they well motivated?

12- In your opinion, does your students' current level allow them to reach fluency and communicative competence?

13- Do you think they need this or just technical terminology of aviation?

Aviation English

1- Within the field of aviation, what are the language skills that the teacher should focus on?

2- Collaboration between ESP teacher and subject specialists (instructors)

Students' Necessities, Lacks and Wants

1- What do you think your students' needs, lacks, and wants are? (from your session and English in general)

- Needs...............

- Lacks................

- Wants..............

Formulaic Language, ESP, and Aviation

      1- What do you think of formulaic language acquisition as a way of reaching fluency?

      2- How often do you use formulaic sequences in your sessions?

      3- What sort of activities you use and do they include formulaic sequences?

      4- If yes, how do students react to such expressions?

      5- How about explaining for student what formulaicity means and how can we memorize formulaic expressions like idioms, collocations, and phrasal verbs and that we understand them, memorize them, the retrieve them as a whole at the time of use (no division of these expression), can all of this be helpful for them?

      6- Do you think adding some formulaic sequences to your session now is a good idea? (After they understand what formulaicity is, adding simple ones they need like phrasal verbs). Please elaborate?

      7- Would it be helpful for their future careers, and before that, their English language test?

Suggestions

   1- Do you have any information you want to provide or add?

…………………………………………………………………………………………

……………………………….

Appendix 5

The Researcher's Aviation English Assessor Certificate

UK Civil Aviation Authority
Approved Language Assessment Body
UK.PTO-0169

LTAS ☑
LANGUAGE TESTING & ASSESSMENT SERVICES

Certificate of Training

This is to certify that

TAREK ASSASSI

having duly completed the requisite assessor training and rating standardisation procedures has successfully gained accreditation as an:

EALTS Examiner of English for Aviation

with

Language Specialist Expertise

and is hereby certificated to examine the use of plain English in the context of aviation of candidates of a level of proficiency up to and including ICAO *Expert Level 6* in accordance with the criteria contained in the *ICAO Language Proficiency Rating Scale* for language of *Attachment to Annex 1* of *ICAO Doc 7300: Convention on International Civil Aviation.*

Surname:	ASSASSI		Examiner Trainer №:	1-1-ETR001
First Name(s):	TAREK		Date of training:	SEPTEMBER 2015
Date of Birth:	17/04/1991		Date of issue:	SEPTEMBER 2015
M/F:	MALE		Centre:	AURÉS AVIATION
Nationality:	ALGERIAN			BATNA, ALGERIA
First Language:	ARABIC/FRENCH		Certificate №:	LAN TST 295 1204/LSE

Examinations Manager
LTAS Ltd
www.ealts.com

Civil Aviation Authority

LTAS Ltd., the administrators of the EALTS, has been approved by the UK CAA as an ICAO Doc 9835 and EASA Part FCL compliant Language Assessment Body and is empowered to operate in the capacity of assessor of Aviation English language proficiency (UK.PTO-0169)

APPENDICES

Appendix 6

An Approval Letter Issued by the Academy for the Researcher

Aures Aviation Academy:

Address: Zone Industrielle Kechida Batna Algerie Batna, (05) Batna / باتنة , 05000

Phone: +213 (0)33 22 26 47 FAX: +213 (0)33 92 27 11

E-Mail: auresflightacademy.lpo@gmail.com

Allows Mr. Tarek Assassi:

DOB: 17/04/1991 Biskra.

Occupation: Student Researcher.

Affiliation: Tlemcen University – Algeria.

To:

- Conduct a questionnaire with the academy's trainees.
- Conduct a Questionnaire with the academy's staff – instructors and administrators.
- Conduct an interview with Cpt. Mehdi Djamel.
- Use the academy's facilities with the company of a staff member.
- Attend courses at the academy.

Batna/Algiers- Algeria: January 5th, 2016

Appendix 7

Types of Training Provided by Aures Aviation Academy

Type de formation	Niveau d'accès	Certificat médical	Age requis	Durée de la formation
PPL (private pilot licence)	3eme AS	Class 2	18 ans	06 mois (Théorique et pratique)
CPL (Commercial pilot licence)	Bac + 2	Class 1	18 ans	12 mois (5 mois théorique + 7 mois pratique)
Qualification IR (IFR)	CPL	Class 1	18 ans	3 mois (théorique et pratique)
ATPL Intégré (Air transport pilot licence)	Bac + 2	Class 1	18 ans	18 mois (9 mois théorique + 9 mois pratique)
ATPL théorique (Air transport pilot licence)	(CPL+IR)	Class 1	18 ans	(4 mois)

Note : le candidat doit passer avec succès un entretien avec le responsable pédagogique

Appendix 8

Aures Aviation Academy

- TEL: +213 (0)33 22 26 47 FAX: +213 (0)33 92 27 11

- *http.//aures-aviation.com*

- Zone Industrielle Kechida Batna Algerie <u>Batna</u>, <u>(05) Batna / باتنة</u> , 05000

- E-mail : <u>auresflightacademy.lpo@gmail.com</u>

APPENDICES

Appendix 9

The English Language Annex at Aures Aviation Academy

Appendix10

A Weekly Programme Sample at Aures Aviation Academy

Aures Aviation

GROUPE PRIVE ATPL(A)

PROGRAMME HEBDOMADAIRE DES COURS

DU : 02/08/2015 AU : 06/08/2015

SALLE DE CLASSE : Nouveau Bloc

Semaine N° 06

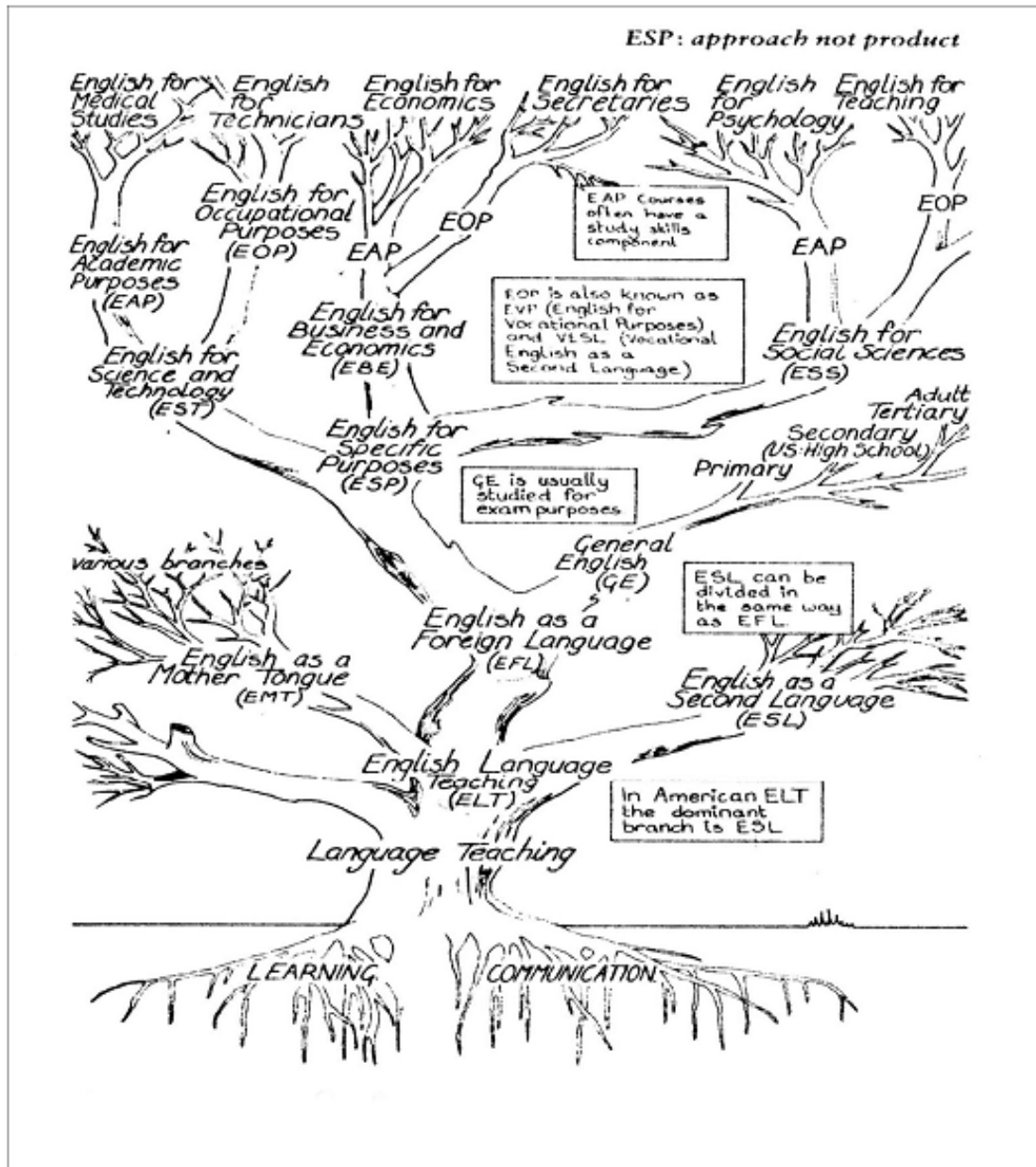| Jours / Période	DIMANCHE	LUNDI	MARDI	MERCREDI	JEUDI
08h00—10H00	/	METEOROLOGIE	METEOROLOGIE	NAVIGATION/RADIONAV	NAVIGATION/RADIONAV
10h00—10H15	PAUSE				
10H15—12H15	NAVIGATION/RADIONAV	METEOROLOGIE	NAVIGATION/RADIONAV	CONNAISSANCES GENERALES DES AERONEFS	CONNAISSANCES GENERALES DES AERONEFS
12H15—13H30	PAUSE DEJEUNER				
14H00—16H00	NAVIGATION/RADIONAV	NAVIGATION/RADIONAV	NAVIGATION/RADIONAV	METEOROLOGIE	CONNAISSANCES GENERALES DES AERONEFS

- CONNAISSANCES DES AERONEFS : M.BOUNAAMA A
- METEOROLOGIE : M.BOUKHBALET.R
- NAVIGATION/RADIONAVIGATION : Mr MAALEM ABDELKRIM

LE RESPONSABLE PEDAGOGIQUE

Appendix 11

The ELT Tree

ESP: approach not product

English for Medical Studies · English for Technicians · English for Economics · English for Secretaries · English for Psychology · English for Teaching

English for Occupational Purposes (EOP) · EOP

EAP · EAP

EAP courses often have a study skills component

English for Academic Purposes (EAP)

English for Business and Economics (EBE)

EOP is also known as EVP (English for Vocational Purposes) and VESL (Vocational English as a Second Language)

English for Social Sciences (ESS)

English for Science and Technology (EST)

English for Specific Purposes (ESP)

Adult · Tertiary · Secondary (US-High School) · Primary

GE is usually studied for exam purposes

General English (GE)

ESL can be divided in the same way as EFL.

various branches

English as a Foreign Language (EFL)

English as a Mother Tongue (EMT)

English as a Second Language (ESL)

English Language Teaching (ELT)

In American ELT the dominant branch is ESL

Language Teaching

LEARNING · COMMUNICATION

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Appendix 12

Description of the Speaking Test

Test of Speaking description			
Format	**NOTE:** The EALT Test of Speaking is typically delivered in the paired test format; paired examiners and paired candidates. The paired candidates may know each other, or they may never have met before.		
Task	**Nature of Interaction**		**Timing**
Introduction	The examiner (the interlocutor/assessor) introduces him/herself and his/her non-speaking examiner colleague (the observer/assessor) and confirms the identity of the candidates.		
Task 1	**Inform & describe** *Giving details of aviation-operations environments and activities*	Verbal questions Two- and three-way face-to-face interaction	The interlocutor interviews the candidate(s) using verbal questioning based on familiar aviation operations related topic frames. Candidates speak about themselves and are given the opportunity to discuss common and concrete topics in the context of their areas of aviation-related activity. A candidate is encouraged to interact both with the interlocutor and his/her fellow candidate. There is interlocutor flexibility in the use of low- and high- end ICAO Language Proficiency Rating Scale (LPRS) discriminators.	5-6 minutes
Task 2	**Monitor, check, clarify, confirm & report** *Negotiation of understanding turn-taking making a verbal report*	Verbal rubrics with recorded aural prompt Two-way voice-only collaborative interaction	Candidates discuss with each other in voice only interaction the nature and details of a non-routine situation or event presented as a recorded aural prompt. The candidates listen to an R/T communication involving the development of an aviation related non-routine situation or event. The candidates have a given time to discuss with one another the details of the communication before one candidate may be nominated to present a concise report in plain English. Candidates are required to use appropriate communicative strategies to report and exchange understanding and to recognise and resolve misunderstanding as they work towards the negotiated completion of the task by checking, clarifying and confirming the information and details contained in the communication as preparation for the presentation of a report. The candidates interact principally with each other but may also ask the interlocutor to repeat, clarify or confirm any specific detail(s) contained in the communication, with the discussion of the R/T allowing for the demonstration of both aural comprehension and discourse management strategies. On the completion of the discussion, the interlocutor may ask one or two concluding questions. More than one R/T communication may be played, discussed and reported. The number of recorded prompts to be played is at the discretion of the interlocutor. Candidates are expected to share the interaction and to initiate and respond appropriately.	5-6 minutes
Task 3 (Normal)	**Explain & discuss** *Managing a developing non-routine scenario in aviation extended speaking turn*	Verbal rubrics and stimuli with written prompts Individual & two-way face-to-face interaction	The interlocutor presents each candidate with a scenario of an unusual circumstance or emergency situation that may occur within the context of a routine operations situation or communicative task with which they are otherwise familiar. The scenarios are customised to the candidates' own areas of operational activity. Following a series of generalised written prompts, the candidates are required to give a briefing of approximately two-minute's duration explaining the nature of the scenario and its effective management. The candidates have one minute to prepare their briefing. The briefing allows the candidates to demonstrate the range and accuracy of language they are able to draw upon in the successful management of a complication or unexpected turn of events. During their speaking turn neither the interlocutor nor the listening candidate will interrupt. At the end of the speaking turn, the listening candidate will be required to ask questions about, comment on or add to the discourse given. The interlocutor may then ask one or two concluding questions. There is interlocutor flexibility in the use of high- and low-end LPRS discriminators.	7-8 minutes *(incl. 1 minute preparation time)*
Task 3 (Extended)	**Discuss** *Discussion related to non-routine scenarios in aviation*	Three-way face-to-face interaction	At his/her discretion, the interlocutor may ask the candidates to participate in a discussion of a more abstract nature, based on verbal questions thematically linked to their Task 3 scenarios. The questions asked by the interlocutor are not designed to test the technical knowledge of the candidates, but will examine further the candidates' ability to express thoughts and opinions in English. Candidates are expected to share the interaction and to initiate and respond appropriately. There is interlocutor flexibility in the use of high- and low-end LPRS discriminators.	3-4 minutes *(if applied)*

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ملخص

يحقّق هذا البحث في وضع وتأثير اللّغة النمطيّة الصّيغية في الخطاب المتعلق بمجال الطيران والذي نلتمسه فالمحادثات الهاتفية الراديوية على سبيل المثال. يناقش الباحث اللغة النمطيّة الصيغيّة والمتعلقة بالكفاءة الخطابية فاللغة، التي ينصح بها بشدة من قبل المنظّمة الدوليّة للطّيران المدني (الإيكاو) وذلك لتمكين هؤلاء والعمل في المجال الجوي الدولي.

الهدف الرئيسي من هذا البحث هو تسليط الضوء على أهمية الكفاءة اللغوية الجاهزة للمحادثة وتنفيذ هذه الصيغ على برنامج مكيّف خاص باللغة الإنجليزية لأهداف محددة وهكذا، فإنّ الباحث يستكشف وضع اللغة الإنجليزية لأهداف محددة بأكاديمية الأوراس للطيران وذلك عن طريق تحديد اهداف واحتياجات المتعلمين التّعلّمية. يضع الباحث موضع التّنفيذ، عدد من طرق التدريس ومحتويات ذات الصلة باللغة النمطية الصيغيّة من أجل تحقيق كفاءة تواصلية قادرة على أن تُوظف بنجاح على الصعيد الدولي.

الكلمات المفتاحيّة: اللغة الإنجليزية لأهداف محدّدة، إنجليزية الطّيران، تصميم وتحليل الاحتياجات، اللغة الصّيغية والكفاءة الخطابية.

Résumé

La recherche présente examine l'occurrence et l'effet de la langue conventionnelle (formules linguistique préfabriqué) dans le discours de l'aviation prenant la radiotéléphonie comme exemple. Le chercheur s'intéresse a la relation de la langue conventionnelle avec la compétence de la conversation, qui est hautement recommandé par L'Organisation de l'Aviation Civile Internationale (OACI) pour les professionnels de l'aéronautique afin d'être en mesure d'opérer dans l'espace aérien international.

L'objectif principal de la recherche consiste de souligner l'importance de la langue préfabriquée sur la compétence de la conversation et mettre en œuvre ces formules sur un cours d'Anglais pour des objectifs spécifiques. Ainsi, le chercheur explore la situation de l'enseignement de la langue Anglais dans -Aures Aviation Academy- à travers l'analyse des besoins cibles des étudiants et leur besoins d'apprentissage. Il met en pratique un certain nombre de méthodes pédagogiques et des contenus associés à la langue conventionnelle dans un souci d'atteindre la compétence en communication et d'être capable de fonctionner avec succès au niveau international.

Mots-clés : Anglais pour des Objectifs Spécifiques, L'Anglais Spécifique a l'Aviation, conception de cours, l'analyse des besoins, la langue conventionnelle, la compétence de conversation.

Abstract

The present research investigates the occurrence and effect of formulaic language in aviation speech taking radiotelephony as an example. The researcher discusses formulaic language in relation to conversation competence, which is highly recommended by the International Civil Aviation Organization for aeronautics professionals in order to be able to operate on international airspace.

The main aim of the research is to highlight the importance of formulaicity on conversation competence and implement these formulae on an adapted ESP syllabus. Thus, the researcher explores the ESP situation in Aures Aviation Academy by identifying learners' target and learning needs. He puts into practice a number of teaching methods and contents related to formulaicity for the sake of reaching communicative competence and be able to operate successfully on the international level.

Keywords: ESP, Aviation English, course design, needs analysis, formulaic language, conversation competence.