

ENGLISH LANGUAGE PROFICIENCY COURSE FOR PILOTS



Thesis submitted in partial fulfillment of the requirement for the Degree
of Masters of Arts in English

Date of Submission: April 2007



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of Masters of Arts in English

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TO MY FATHER

ABSTRACT

The language is used as a major tool of safety, controlling international transport operations, especially on air and water. While traveling to different destinations, pilots have to communicate with the control tower of different countries. Among the controllers, many of them are non- native speakers; of English because of this a common lingua franca was necessary and English was chosen as that lingua franca. An airlines pilot has to maintain continuous communication with the control tower in order to ensure the safety of the passengers. A dangerous accident can occur because of miscommunication. Safety is the supreme objective of air navigation services. Clear English with clear pronunciation is important during in-flight communication especially when pilots and controllers communicate with each other. Many accidents have occurred because of miscommunication. Therefore, if the language is not properly conveyed there is a possibility of mishap.

This research was descriptive and qualitative in nature. Its purpose was to find out whether there is a need for specific English courses for pilots and controllers and the significance of pronunciation in pilot/controller communication. For this research, data was collected from 40 subjects consisting of trainee pilots, pilots, instructors, students and a controller. For this research, data was collected in informal and formal settings. Data was collected by interviews and questionnaire. After collecting the data, they were transcribed, tabulated, and analyzed in terms of the research questions.

The first research question was whether there is a need for a specific English language course for pilots and controllers. After analyzing the questionnaire and the transcriptions of the recordings, the researcher found that, specific English language course is necessary for pilots and controllers, because, they have to face different speakers of English in different countries, who do not always speak or pronounce correct English. In an emergency, English language deficiency (especially aviation English) could lead to a dangerous situation. The second research question whether pronunciation is important for pilots and controllers. During pilot/controller communication, pronunciation plays a significant role because incorrect pronunciation sometimes changes the actual meaning of words, sentences or phrases. The findings seem to suggest pronunciation is very important for pilots and controllers.



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DECLARATION

I certified that this thesis is based on my original work except for the quotations and citations. I also declare that it has not been submitted before from anywhere.

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TABLE OF CONTENTS

	Page
DADICATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	v
DECLARATION FORM	vi
APPROVAL SHEET	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xii
LIST OF ABBREVIATION	xiii

CHAPTER

I INTRODUCTION

1.1 Background	1
1.2 Statement of the Problem	1
1.3 Research Questions	5
1.4 Purpose of the Study	6
1.5 Significance of the Study	6
1.6 Delimitations of the Study	7
1.7 Limitation of the study	8

1.8 Definition of Key Terms	9
1.8.1 Air- traffic:	9
1.8.2 Air traffic control	9
1.8.3 Area- navigation:	10
1.8.4 Flight crewmembers	10
1.8.5 FAA	10
1.8.6 Pilots	11
1.8.7 Air traffic controller	11
1.8.8 Control tower	12
1.8.9 International Civil Aviation Organization	12

II LITERATURE REVIEW

2.1 Introduction	14
2.2 Accident Records	15
2.3 Radiotelephony communication	17
2.4 Aviation Language	18
2.5 Pilot requirement procedures	21
2.6 Aviation course outline	23
2.6.1 Instrument Flying	23
2.6.2 The principles of flight	23
2.6.3 Navigation	23
2.6.4 Metrology	24
2.6.5 Air traffic rules and services	24
2.7 Language proficiency course plan	25
2.8 International Civil Aviation Authority's Rules	26
2.9 Present Aviation English Language Courses	26
2.9.1 Flight Speak	27
2.9.2 BBSI International Education and Training	27
2.10 English for Specific Purpose	28
2.10.1 English for Academic purpose	30
2.10.2 English for occupational purpose	30
2.11 Pronunciation	31

2.12 History of Airlines: The Bangladesh Scenario	32
2.12.1 Civil Aviation Authority	32
2.12.2 Bangladesh Flying Academy	33
2.12.3 Biman Bangladesh Airlines	33
2.12.4 Air parabat Airlines	34
2.12.5 GMGAirlines	35
2.12.6Unitedairlines	35

III METHODOLOGY

3.1 Design of the Study	36
3.2 The Setting	37
3.3 Sampling	37
3.4 Research Instruments	39
3.4.1 Recordings of the interview	39
3.4.2 Questionnaire	39
3.5 Data Collection Procedure	41
3.6 Data Analysis Procedure	42

IV RESULTS AND DISCUSSION

4.1 Introduction	4.1
4.2 Analysis of Questionnaire Data	44
4.2.1 Question 1	54
4.2.2 Question 2	55
4.2.3 Question 3	56
4.2.4 Question 4	57
4.2.5 Question 5	57
4.2.6 Question 6	58
4.2.7 Question 7	59
4.2.8 Question 8 and 9	59
4.3 Analysis of Recorded Data	60
4.3.1	61
4.3.2	63
4.3.3	65

4.4 Questionnaire and Recordings	66
4.5 Answering the Research Questions	68
V CONCLUSION	
5.0 Introduction	71
5.1 Summary of the study	71
5.2 Contribution to Research	73
5.3 Practical Implication	74
5.4 Suggestions for Further Research	75
5.5 Recommendation How to overcome the situation	75
5.6 conclusions	76
REFERENCES	77
APPENDIX – A	
Questionnaire of the research study	78

LISTS OF TABLES

page

- 2.1 Accidents records collected from Flight Safety.
- 2.2 Alphabets of Aviation English
- 2.3 Numbers of Aviation English
- 4.1 Students responses
- 4.2 Pilot, Pilot/instructors and a Controllers responses



LIST OF ABBREVIATION

ATC - Air Traffic Controller

ADREP -ICAO Proficiency Requirements in Common English Study Group

ATA – Air Transport Authority

AVSEC - Aviation Security

BBSI - Bournemouth Business School International Courses

CAA - Bangladesh Civil Aviation authority

CAAB -Civil Aviation authority of Bangladesh

CPL - Commercial Pilot Licence

DCA -The Department of Civil Aviation

FAA - US Federal Aviation Administration

FANS - Future Air Navigation System

ICAO -, International Civil Aviation Organization

NTSB - U.S. National Transportation Safety Board

PPL - Private Pilot Licence

PRICE - ICAO Proficiency Requirements in Common English

SOP - Standard Operating Procedures

CHAPTER I

INTRODUCTION

This chapter presents the background of the study, the statement of the problem, the research questions, and the purpose of the study and the definition of key terms. This section also sets the parameters of the study.

1.1 Background

The language is used as a major tool of safety, controlling international transport operations, especially on air and water. The Airlines business is a risky business because a single accident could damage the whole airlines industry. While traveling to different destination pilots have to communicate with the control tower of different countries. Among the controllers, many of them are non- native speakers. In these circumstances, a common lingua franca is necessary: English is chosen as that lingua franca. An airlines pilot has to maintain continuous communication with the control tower in order to ensure the safety of the passengers. A dangerous accident can occur because of miscommunication.

1.2 Statement of the Problem

Safety is the supreme objective of air navigation services. In the aviation industry many people work together in different positions, for example, pilots, controllers, operation officers, flight attendants, etc. When they speak English, it differs from each other in

varying degrees. Flight attendant's language differs from pilot's language. Flight attendants, sales officers, traffic officers use conversational English. Pilots also use conversational English while communicating with passengers. but when they (pilots) interact with the control tower their mode of communication changes, this is known as aviation language. Aviation language has its own set of vocabularies, like A for Alpha, B for Bravo, C for Charlie, D for Delta, E for Echo, and so forth (see literature review chapter). The pilots expand the words, so that the controllers can easily receive the message, and vice versa. In the aviation, industry despite all the safety measures mishap happens, where miscommunication plays a significant role.

Most people are not familiar with air traffic services. Air traffic services have been introduced long after the invention of airplane. Necessity of establishing air traffic services was felt when number of aircraft flying started increasing. Air traffic controller's controls all flights within 25 miles from ground up to altitude of 4000ft (Alam. 1994:19). They give take off clearance to the outgoing aircrafts and landing clearance to the incoming aircrafts. At the same time, they guide other training flights, instrument check flights, etc. So, controllers have to manage a huge number of aircrafts at the same time. Many aircrafts arrive and depart at a time and the only medium of communication

between pilots and controllers is through the English language. Since English is spoken all over the world, it has been chosen as the language of air traffic system. Now a days, the numbers of aircrafts are increasing and they have to operate within limited air- spaces.

So, if pilots or controllers do not communicate effectively and efficiently the entire system could be endangered.

Clear English with clear pronunciation is important during in-flight communication especially when pilots and controllers communicate with each other. Clear pronunciation is necessary for good communication, that is, pilot's need to communicate clearly and unambiguously with the control tower to reduce the possibility of confusion in sending and receiving messages. According to International Civil Aviation Authority journal " In 1944, English choose as a lingua franca in aviation sector." (Crystal, 97:100). Not all pilots have a good command of English. Pilots who have poor pronunciation make it difficult for a controller to understand due to the presence of background aircraft noise and the effects of stress on the voice.

In the pilot training courses the US Federal Aviation Administration (FAA) have recommended a number of courses--- pre-taxi planning and briefing, task prioritization, use of standard operating procedures (SOPs) for surface operations and effective crew resource management. but not a single course on language training.

Crystal (1997) points that, over 180 nations have adopted the recommendations of the International Civil Aviation Organization (ICAO) about aviation English terminology. Arguments about safety involve many factors and it is difficult to isolate one and rely on

it entirely. There have been some fatal mishaps, where the primary cause was miscommunication. In such an instance, the Controller generally cannot understand the pilot's speech or the pilot fails to catch the controller's instructions and accidents occur. So, miscommunication should not be overlooked by the aviation authority.

Many accidents have occurred because of miscommunication. Therefore, if the language is not properly conveyed there is a possibility of mishap. Not only correct English but also clear pronunciation is equally important. In the past many accidents occurred because of miscommunication. Good communication is the key to the aviation industry. In a marketing environment, miscommunication means the loss of sales and pilot-controller miscommunication can cause the loss of many lives. A number of accidents have occurred over the last 30 years where poor communication was partially responsible for some of them.

Brian Day, Chairman of ICAO *proficiency requirements in common English (PRICE)*.

(Doherty,2003:22) study group says that a review of 28,000 reports in the *Aviation safety* revealed that over 70% of the problems cited were in lack of proper information transfer. Elizabeth Mathews, linguistic consultant to ICAO and member of the PRICE study group says:

Essentially recommending the use of a language without defining a proficiency level render implementation difficult at best and enforcement impossible. Simply put, it is akin to establishing a requirement that pilots must be skilful; without specifying what 'skilful' means.

(Doherty,2003,23)

Sometimes colloquial terminologies hamper the communication, because accent varies from country to country- different people speak English in different ways, with variations in pronunciation. In Asian subcontinent, the natives pay less attention to stress, intonation, and rhythm. Their English may not always be mutually understood.

In Bangladesh, there are two airlines at present:

1. Biman Bangladesh Airlines (government)
2. GMG Airlines (private)

At the time of recruitment in Bangladesh Biman the pilot's take aviation subject test, I.Q test, flying test and medical test; however, they do not take any language test, though it is equally important. GMG Airlines also has the same problem regarding pilot requirement as Biman.

1.3 Research Questions

In light of the above, this study seeks to address the following research questions with specific reference to the aviation context:

1. Are ESP courses necessary for pilots?
2. Is pronunciation important for pilots?

1.4 Purpose of the Study

The purpose of this research is to concern the aviation authority, Airlines Company, pilot's and air traffic controllers. The general objective of this research is to find out the reasons of miscommunication in aviation sector. One of the reasons is unclear pronunciation between pilots and air traffic controller. In Bangladesh accent differs, people from different regions of the country have problems pronouncing words like: s, r, v, b, etc. Due to incorrect pronunciation, sometimes the whole sense of a sentence may change. In air traffic system, it can be hazardous. So, the civil aviation authority must take this matter seriously and take proper steps to address the problem. A study of this nature may help to focus on the situation regarding the need for English courses, where pronunciation is emphasized.

1.5 Significance of the Study

Crystal points out that, according to the ICAO data between 1982 and 1991, more than 11% accidents happened where many passengers and crew lost their lives in accidents in which investigators determined that language had played a contributory role. Moreover, numerous incidents involving language issues, including a number of runway incursions are reported annually. Among many issues of airlines accidents, miscommunication between pilots and controllers is one of the major issues. A single accident can ruin an airline's reputation. No one would dare to fly in the airlines, which has a bad record of accomplishments. Language can be a big factor of accidents. Because if pilots and

controllers cannot communicate accurately, accidents could happen anytime. Therefore, language is an important issue which most of the time the authorities overlook.

Communication is very important in aviation sector. So, “language barriers” should be identified, as one of the most important issues. The purpose of the research is to concern the Bangladesh Civil Aviation authority because they (CAA) make all the rules and regulations of air transportations. After any accident, first CAA has to give explanation to the Government. So, their reputation is related with the accidents. They could identify this “language problem”. This study will alert them about the dangers of miscommunication. In the long run CAA and Airlines owners will realize the importance of language and train pilots and controllers to stop accidents.

1.6 Delimitations of the Study

Aviation industry is a huge sector, so it is impossible to collect data from all the pilots, controllers and instructors within a limited time span. Language barrier or miscommunication between pilots and controllers is one of the major issues. In language, “proficiency” is very important. In aviation industry fluency in language is a must. That is why, in this research, English language ‘proficiency’ is emphasized. For data collection and information twenty trainee pilots, nineteen pilots and a controller are chosen as sample. The research would be rich if the number could be increased, due to the limited time it was not possible. As usual, there are many types of planes, like

training plane, warplane, cargo plane etc. In this research, mainly the pilot's of the airlines is highlighted.

1.7 Limitations of the study

In Bangladeshi context, this type of study has not been done yet. So, it was very difficult for the researcher to collect information. Time was a big factor here because the research area was unfamiliar and pilots and controllers maintained a tight secludes; it was difficult to collect data.

Most of the time research regarding aviation English was overlooked by the aviation authority of Bangladesh. The aviation authority has a pre concept idea that, pilots and controllers have a good language background so they do not need language training but the researcher identified the problem and showed interest to proceed. However, for this ignorance almost no record was found. That is why the researcher took a long period of time to gather information's from journals, books, internet, aviation magazines and papers.

Controllers are not allowed to give interviews though their point of view is equally important for this research. The researcher managed to get from her personal conduct ,an ex Air Traffic Controller trainer to give interview. To fix the interview it took almost two weeks. At the same time the Flying Academy is a restricted area, and visitors are not

allowed to go there. Trainees are also busy either in class or in flying, so the researcher had to take help of an ex- student of Bangladesh Flying Academy. Senior pilots were also busy to give appointments and it was also difficult to get a good number of them together. So, the interview was taken on two different days.

The researcher is new in this arena and it was difficult for her to understand the research process, but her supervisor helped her lot to manage everything. At the time of recording, the recorder disturbed so the researcher took notes.

1.8 Definition of Key Terms

1.8.1 Air- traffic

Air traffic means aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas. (FAR/AIM 94, editor: Aviation suppliers & Academics, Inc, 1994 addition)

1.8.2 Air traffic control

Air traffic control means a service operated by appropriate authority to promote the safe, orderly, and expeditious flow of air traffic. (FAR/AIM 94, editor: Aviation suppliers & Academics, Inc, 1994 addition)



1.8.3 Area-navigation

Area-navigation means a method of navigation that permits aircraft operations on any desired course within the coverage of station – referenced navigation signals or within the limits of self- contained system capability. . (FAR/AIM 94, editor: Aviation suppliers & Academics, Inc, 1994 addition)

1.8.4 Flight crewmembers

Flight crewmembers means a pilot, flight engineer, or flight navigator assigned to duty in an aircraft during flight time. (FAR/AIM 94, editor: Aviation suppliers & Academics, Inc, 1994 addition)

1.8.5 FAA

FAA means Federal aviation administration. (FAR/AIM 94, editor: Aviation suppliers & Academics, Inc, 1994 addition).

1.8.6 Pilots

There are mainly two types of pilot:

1. Private pilot
2. Professional/ commercial pilot

A private pilot has to complete five subjects and 50 hours flying .A professional / commercial pilot has to complete 11 ground courses and 200 hours flying. The medium of education is English, but they do not have any language course.

1.8.7 Air traffic controller

Air traffic controllers are persons who operate the air traffic control system to expedite and maintain a safe and orderly flow of air traffic and help prevent mid air collisions. They apply separation rules to keep each aircraft apart from others in their area of responsibility and move all aircraft efficiently through 'their' airspace and on to the next. Controllers have a large responsibility while on duty it is regarded as one of the most difficult and stressful jobs today.

1.8.8 Control tower

A control tower (ATCT) is the name of the air traffic control unit responsible for movements around an airport. Permanent control tower structures generally rise high above other buildings at an airport to give air traffic controllers a view of aircraft moving on the ground and in the air around the airport, though temporary tower units may operate from trailers or even portable radios outside. Full control tower structures usually have windows that circle the entire top floor, giving 360 degrees of viewable area. The windows are usually tilted outwards, because otherwise the controllers inside would see the reflection of equipment behind them. The ceiling may also be painted black.

Medium-traffic airports may have only one controller staffing the control tower, and may not keep the tower open 24 hours per day. Busier airports usually have space for several controllers and other support staff, and operate 24 hours per day, 365 days per year.

1.8.9 International civil organization

International Civil Aviation Organization aviation was established in 7 December 1944 in Chicago. It is a world body to ensure the safety, reliability and efficiency of air travel. Total member states of ICAO have grown from 26 contracting states in 1947 to 183 in 1994 and Bangladesh is one of the member states of ICAO. It ensures that pilots and other airline personnel are trained and licensed and the 'rules of the air' – are clearly

recognized and observed. Over the years, Civil Aviation has been progressively improving its safety standards and recommended practices by adopting new technology and flight safety rules and regulations.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Effective communication is vital in all sectors of aviation. Speaking in English is essential to the aviation professional in today's world. The new ICAO standards require a good intermediate level of English proficiency as a licensing requirement for international route pilots and controllers in charge of international traffic. Radio communications is a critical link in the air traffic control system. The air traffic controllers must know where each airplane is and what it is going to do. The pilot and ground controller talk to each other through the radio installation in the airplane and similar radio systems on the ground. There are ground radio sets in Control Towers at the airports and at stations throughout the air lanes. This is known as the Air Traffic Control System (ATC). All airliners and most business aircraft use this system for safe and efficient flight in the national airspace system. The single most important thought in pilot/controller communications over the radio is to clearly understand each other. The radio sets on the airplane instrument panel are designed to both send and receive on the same frequency. The airport controllers and air traffic controllers each have certain assigned frequencies to make it easy to set up communication between specific airplanes and ground control. Though communication is one of the most important factors and ICAO also recommended language training for pilots and controllers, most of the time it is overlooked by the authority.

2.2 Accident Records

Many accidents happened because of miscommunication. English is a second language. Therefore, if the language is not properly utilized there is a possibility of mishaps. Not only correct English but also clear pronunciation is equally important. In the past, many accidents happened because of miscommunication. Some records are given below:

1. In 1990, Avianca Airlines flight 052, inbound to New York's John F. Kennedy International airport, crashed when it ran out of fuel. The U.S. National Transportation Safety Board (NTSB) determined that the probable cause of the accident was:

The failure of the flight crew to adequately manage the airplane's fuel load, and their failure to communicate an emergency fuel situation to air traffic control before fuel exhaustion Occurred.

(Mathews, 2003:7)

2. In 1995, an American Airlines Boeing 757 approaching Cali, Columbia, turned off course, crashing into a mountainside and killing on board. The air traffic controller later told investigators that the flight crew's last reported position was incongruent with the tower (Mathews, 2003:7).

3. Swiss air flight 111 crashed off the coast of Nova Scotia, Canada on 2 September 1998. Among all the possible causes miscommunication between the pilot and controller, identifies one of the possible cause of accident (Mathews, 2003:7)

The information is collected from the Flight safety organization. The researcher e-mail in flight safety to collect accidents report and they replied. The reports are given in the Table-2.1.

Table-2.1: Accident records collected from flight safety

<p>1. 25th February 1960, collision between a US navy DC-6 & a real DC-3 in the middle of other reasons, the roles of language problem was significant. Controller's underestimation of the time factors, including aircraft reaction time; and his lack of appreciation of the communications difficulties and the increasing seriousness of the situation, combined to create the conditions, which led to the collision.</p>
<p>2. 13th April, 1947, British South American Airways crashed at Senegal. The reason was difficulties in exchange of radiotelephony communications between the control tower and the aircraft. Insufficient knowledge of the English language by the controllers in the tower, according to the Americans and British. As regards to the crew, there certainly appears to have been a slight nervousness during the attempts to land.</p>
<p>3. 24th January ,1966, Boeing 707 & 437, operated by air India collision in flight. Probable cause was want of a sufficiently precise phraseology. the correction was misunderstood by the pilot who, under the mistaken impression that he had passed the ridge leading to the summit and was still at a flight level which afforded sufficient safety clearance over the top of Mont Blanc, continued his descent.</p>

(Source:<http://www.flightsafety.org>)

Above all the accidents there are some other accidents have happened, like in 1977 a Boeing 737 crashed, the reason is unknown. Then 22nd april, 1977, Beech king air crashed, again reason is unknown. In 2003, Boeing 747 and 737 crashed because of miscommunication between pilot and controller. Super king air crashed in Grand canyon, the reason is same. From 1982 – 1992, 11%. (Crystal, 1997:101) fatal crash happens because of miscommunication. So, miscommunication plays an important role in these accidents. The related people should concern in this issue.

2.3 Radiotelephony communications

Inadequate English proficiency on the part of pilots and controllers play an important role amongst all the causes of airlines accident. Pilots have to fly over many countries, controllers also have to face different countries pilots at a time. Sometimes may be an emergency can happen and to handle this situation, previous language knowledge is very important.

Language Problem is cited in numerous accident investigation reports in the ADREP database, since the mid 1970s, there have been over 1,500 fatalities in world wide, in which more than nine accidents were identified where language as a possible cause. A number of other fatal and non-fatal accidents appearing in the ADREP cite language barrier as an issue.

(Mathews, 2003:7)

Recently concern about the matter “language proficiency”. ICAO has revised the radiotelephony communication process. Three aspects of language use in radiotelephony communications are fundamental:

1. The correct use of ICAO phraseologies is critical. (Incorrect use can result in miscommunication).
2. Proficiency in common or plain language is important for safe radiotelephony communications.
3. Clear pronunciation is very important for radiotelephony communication. The general objective of this research is to find out the reasons of miscommunication in aviation sector.

(Mathews, 2003:7)

2.4 Aviation Language

Aviation language is different from common conversational English. especially pilot and controller's speech is different. They use a kind of code language with different vocabularies, but others like flight attendants, sales officers, traffic officers, etc use common conversational English. The primary responsibility of a flight attendant is the safety of the passengers and emergency preparedness. This is followed by the routine tasks of customer service, serving meals and drinks, etc. Therefore, they communicate with the passengers using common language. Their miscommunication can create problems. However, if the pilot fails to communicate with the control tower, it can cause death of many lives. Pilots use aviation English. The whole chart of the alphabets of aviation English is given in Table- 2.2 and numbers of aviation English is given in Table- 2.3.



Table-2.2: Alphabets of aviation English

The whole chart is given below:

A- Alfa	Al- fah
B – Bravo	BRAH – VOH
C – Charlie	CHAR-LEE, SHAR-LEE
D – Delta	DELL- TAH
E – Echo	ECK-OH
F – Foxtrot	FOKS-TROT
G – Golf	GOLF
H – Hotel	HOH-TEL
I – India	IN-DEE-AH
J – Juliett	JEW-LEE-ETT
K – Kilo	KEY-LOH
L – Lima	LEE-MAH
M – Mike	MIKE
N – November	NO-VEM-BER
O – Oscar	OSS-CAH
P – Papa	PAH-PAH
Q – Quebec	KEH-BECK
R – Romeo	ROW-ME-OH
S – Sierra	SEE-AIR-RAH
T- Tango	TANG-GO
U – Uniform	YOU-NEE-FORM
V – Victor	VIK-TAH
W – Whiskey	WISS-KEY
X – Xray	ECKS-RAY
Y – Yankee	YANG-KEY
Z – Zulu	ZOO-LOO

(Source: FAR/AIM94, 1994;4-2-5)

Table-2.3: Numbers of aviation English

1 – One	WUN
2 – two	TOO
3 – three	TREE
4 – four	FOW-ER
5 – five	FIFE
6 – six	SIX
7 – seven	SEV-EN
8 – eight	AIT
9 – nine	NINER
0 – Zero	ZEE-RO

(Source: FAR/AIM94, 1994:4-2-5)

Aviation alphabets (Table 1) and numbers (Table 2) are different from common alphabets and numbers. Pilots and controllers pronounce the words in a different style to avoid miscommunication. Pilots and controllers extend the words to be clear and specific to each other and to avoid accidents. Some examples of radiotelephony communications between pilots and controllers are given below:

Example 1

"Tower, this is *YANKEE ZULU ONE NINER NINER TANGO* (YZ199T), ready for take off'. Take off clearance (Pilot).

"Roger, *YANKEE ZULU ONE NINER NINER TANGO*. Proceed on runway *ONE NINER RIGHT (19 RIGHT)*." (Accepted by the controller). (allstar@fiu.edu).

Example 2

VERO BEACH RADIO, CENTURION 6 NINER DELTA DELTA IS TEN MILES SOUTH, two thousand, LANDING VERO BEACH. Request airport advisory. (Request traffic advisory). (Pilot). (FAR/AIM 94, 1994: 4-1-3).

VERO BEACH RADIO, CENTURION 6 NINER DELTA DELTA, Ready to Taxi. VFR, Departing to the Southwest. Request Airport advisory. (Controller). (FAR/AIM 94, 1994: 4-1-3)

2.5 Pilot requirement procedures

According to ICAO (International Civil Aviation Organization) rules, the candidate for private pilot license and commercial pilot license must have 16+, a valid medical certificate, HSC/ equivalent and be able to read, speak and understand English. For airlines flying the pilots should have 200 flying hours, 22+, valid medical certificate and HSC/ equivalent.

¹A pilot first gets his/her PPL (private pilot licence) on completion of around 50 hours of flying that includes certain number of solo flying and Navigational Flying. In addition, the pilot has to appear and pass certain number of theoretical subjects (5 subjects). After PPL, a student starts for his/her CPL (commercial pilot licence) which involves around 200 hours of Flying and 11 theoretical subjects

¹ Capt Rafiqur Rahman, Director flight Operation, Chief flying instructors, GMG airlines.

The procedures for Private & Commercial pilot license is given below

1. 16 years and above
2. Medical certificate
3. HSC/ equivalent
4. Be able to read, speak and understand English.

(FAR/AIM94.1993.61-22)

Airlines pilots requirement criteria is given below

1. 22 years & above
2. Valid Medical certificate
3. HSC/ equivalent (Science)
4. 200 flying hours

(FAR/AIM94.1993.61-22)

Controller requirement criteria is given below²

1. Masters in Physics and math's
2. Medical Certificate
3. English proficiency

² Ali Reza Khan. Ex Director, AERO & ATS (Aerodrome and Air traffic service) flight safety. ICAO consultant.

2.6 Aviation course outline

In the PPL and CPL training, the trainees have to complete 11 subjects, like navigation, metrology, theory of flight, aviation law 1 & 2 etc. Here medium of study is English. Not only have that in their (trainees) practical session they have to communicate with the control tower in English. However, there is no language course in their training. Among all the courses of PPL/CPL, descriptions of some aviation courses are given below.

2.6.1 Instrument Flying

This includes demonstrations of flight under instrument in bad weather conditions using instruments.

2.6.2 The principles of flight

The aim of this subject is to provide basic knowledge about the theory of how a plane flies: the parts of planes, idea of engines, wings, control panels, atmosphere, weight, conception of take-off, landing, taxiing, etc.

2.6.3 Navigation

This subject is based on the concept that trainee pilots should learn to navigate using only the most basic aids in the cockpit during flight, the most basic aids being a map and a pencil. Aids such as a computer, scale rule and plotter may be considered necessary by



some instructors. However, if the flight is adequately and properly planned on the ground before takeoff then there should be no need to use aids. Navigation course basically teaches trainee pilots how to handle emergency situations by relying on basic skills.

2.6.4 Metrology

Safe flight in training planes depends on the weather, especially during the conditions of limited visibility, turbulence and icing. To avoid these hazardous flight conditions, pilots must have at least a basic knowledge of the atmosphere and the behavior of the weather.

Weather-related accidents make up a significantly high proportion of the total accidents each year and the proportion of these accidents is not decreasing. This course includes procedures for avoiding dangerous flying conditions, conditions of clouds, wind and weather, sources of weather information available to the pilot, procedures for making reliable reports of weather conditions being experienced, either in the air or on the ground.

2.6.5 Air traffic rules and services

During the early years of aviation, the safe passage of planes depended upon pilots armed with a simple set of rules of the air and a navigation chart, which covered the intended route to be flown. In more recent years the scene has changed completely, and today the number of aircraft operating in the skies above most countries. There has been a change in the sizes, speed and performance of aircraft.

2.7 Language proficiency course plan

English is chosen as a preferred language in aviation sector. But this language should be in standard language, clear, accent free, so that everyone can easily understand. According to Brian Day (Chairman of the ICAO proficiency requirements in common English study group), miscommunication is a big factor (70%) of aircraft accidents. So, this accident concerns the ICAO authority. The PRICE group start working on it, to solve this problem. They (PRICE group) plan to revise the course and from 2008, (Doherty, 2003:26) language course will be added in aviation course outline. This course emphasizes accurate communication in both speaking and listening.

Dr Jeremy Mell (Assistant Head of languages, Ecole Nationale de L' Aviation Civile , in Toulouse, France), who is primarily involved in ATC training, " believes that language instructors need to have a good grounding in ATC and piloting as well as language teaching skills" (Doherty,2003:26)

When discussing how training courses will need to be structured, Mell, specifies four components,

1. 1 Voice only communication without the body language component.
2. Appropriate tempo and fluency, immediate responses to be tried out and exercised.
3. Effectiveness of communication is more vital than academic correctness.
4. .Accuracy and clarity in speech production, responding to unexpected turns of events, communicative strategies, resolving misunderstandings, Para- phrasing.

(Doherty, 2003:26)

2.8 International Civil Aviation Authority's Rules

According to ICAO, all pilots and controllers must have language proficiency requirements because they have to fly international routes. For pilots and controllers speaking and listening ability is important. The proficient speakers can.

1. Communicate effectively in radiotelephone & in face-to-face situation
2. Communicate accurately on common, concrete & work-related topics.
3. Use appropriate communicative strategies to exchange messages & to recognize & resolve misunderstandings in a general or work-related context.
4. Handle successfully & with relative ease the linguistic challenges presented by a complication or unexpected turn of events within the context of a routine work situation or communicative task with which they are otherwise familiar.
5. Use a dialect or accent that is intelligible to the aeronautical community.

(Adopted from [http:// www. flight sim Aviation.com](http://www.flightsimaviation.com))

Currently there are no effective aviation specific language tests for pilots and only one for controllers. General English tests such as TOEFL is not appropriate for pilots and controllers so they need different types of tests to examine their proficiency in pronunciation, vocabulary, fluency, etc.

2.9 Present Aviation English Language Courses

Recently ICAO authority realises the importance of English language proficiency. Because pilots and controllers have to fly over different countries and most of the countries mother tongue is not English so a standard English language knowledge is

necessary. To solve this problem some countries starts English language courses for pilots and controllers.

2.9.1 Flight Speak

Flight speak teaches English to the aviation industry, new International Civil Aviation Organization English requirements are heating up demand for teachers who can teach the vocabulary and communications used by pilots and air traffic controllers. If a licensed pilot or have experience in this area, several companies offer courses to train teachers of aviation English. *Flight speak* offers a two week crash course in Perth and Scotland.

(Source: [http:// www.flightspeak.com](http://www.flightspeak.com))

2.9.2 BBSI: International Education and Training

BBSI (Bournemouth Business School International Courses) offers training courses and testing in aviation English for pilots, air traffic controllers and other aviation professionals. The objective of this course is to ensure that flight crews and air traffic controllers have sufficient language proficiency in whatever language they use for radiotelephony communications to manage all of the potential communicative needs related to pilots and controllers communication.

([http:// www. bbsi.co.uk.](http://www.bbsi.co.uk))

2.10 English for Specific Purpose

Aviation English differs from other types of English. So, an ordinary English course cannot help pilots and air traffic controllers to solve their problem. They need a special training course. That is why linguistic specialists recommend ESP. Hutchinson's and Waters (1986:19) says, "ESP must be seen as an approach not as a product. It is an approach to language learning, which is based on learner need."

Learners have different needs and interests, which would have an important influence on their motivation to learn and therefore on the effectiveness of their learning. ESP is a special language course, here the curriculum consists of two distinct phases, language delivery and employment awareness.

It is likely to design for adult learners, either at a tertiary level institution or in a professional work situation. Target situation analysis held that the purpose of an ESP course is to enable learners to function adequately in a target situation. English become the accepted international language of technologies mainly focuses on the learners actual needs. Learners were seen to have different needs and interests; ESP helps the learner to communicate accurately in the real world.

People learn language for various purposes. Occupational purpose is one of them. In some types of work, employee is bound to speak in English, for example, aviation job or waiters' job, hotel workers, tourist guides, etc. Therefore, they have to speak English. The course instructor designs course in a different way so that the learner could utilize

The course instructor designs course in a different way so that the learner could utilize their knowledge in the real life situation. In the aviation industry many people works together – pilots, air traffic controllers, traffic officers, sales officers, operation officers, etc. Not everywhere uses the same English. A pilot use common English when he communicates with the passengers or with the flight attendant. However, at the time of radio communication with the control tower, they use different English. That English is known as aviation English. Radio communication is a sensitive system. The in-flight safety depends on it. Therefore, the communication should be in Standard English with clear pronunciation.

Pronunciation varies from each other. It arises problem and in the end causes accident. The pilots and controllers need proper language training to overcome this problem. To identify their lacking first the instructor has to identify their 'needs'. "Needs analysis" plays an important role in syllabus design. Instead of knowing the actual lacking, the course instructor cannot help the learners.

According to John Munby (1978) there are a number of ways in which information can gathered about needs; they are,

1. Questionnaires
2. Interviews
3. Observation
4. Data collection
5. Informal consultations with sponsors, learners and others

ESP mainly can be divided into two parts:

1. EAP (English for Academic purpose)
2. EOP (English for Occupational purpose)

2.10.1 English for Academic purpose

EAP (English for Academic purpose) relates with academic context. EAP courses often have a study skills component.

2.10.2 English for occupational purpose

EOP (English for occupational purpose) relates with the learner's world of work. Fastest growing areas like aviation, national and multinational companies trained their employees, English language, where it is most convenient, at the jobs premises. EOP approach is widely known today, the language teaching profession responded to specific job need with standard GPE (general professional English) Programs "Conversational English , " " improving grammar . ", " pronunciation practice ", and so forth language training is seen as an instructional process which includes any type of experience designed to facilitate learning which will aid performance in a present or future job.

2.11 Pronunciation

It often found that in Bangladesh and Indian subcontinent, English is spoken with an accent related to the mother tongue of the speakers paying little attention to sound patterns, stress, rhythm, and intonation systems of language.

Correct pronunciation is very important in the aviation industry. In the communicative factor accent is highly emphasized. Some countries like Thailand, Malaysia, China, Russia have explicit accent. Outsiders may not easily be able to understand their utterances. This could be very dangerous, it may even cause accidents. Some Arabian countries also have the same problem. Bangladeshis also have the lackings. Especially for pilot- controller interaction correct pronunciation is a must.

A single incorrect word could be responsible for the death of many lives. In Bangladesh some area's people cannot pronounce some words like---- R, S, K, P, F, etc. In the in-flight communication it can create confusion because a pilot has to follow the directions of the controller for departure and landing. If he/she cannot communicate accurately, accidents can happen. The past records Of CAAB (Civil Aviation authority of Bangladesh), suggest that among all the reasons of accidents miscommunication is also a factor.



2.12 History of Airlines: The Bangladesh Scenario

This section is based on the interview taken from senior pilots, pilot/instructors and a controller of Biman Bangladesh airlines, GMG airlines and Bangladesh Flying Academy. Biman Bangladesh airlines, the government airlines started in 1972 flies to 15 international destinations and 5 domestic routes. Before the arrival of the private airlines, Biman was the only airlines.³The rise of private airlines in Bangladesh is the result of some changes in the government policy. It took another couple of years from 1992 to finalize the procedures, criteria, etc for the operation. Finally, in 1995 Aero Bengal become the pioneer to fly as first private airlines in Bangladesh. However, some other companies took the initial license for airlines business but among them Air Parabat and GMG airlines launch their business in the aviation world. Lastly except GMG airlines all other airlines gone.

2.12.1 Civil Aviation Authority

The department of Civil Aviation (DCA) is rearranged in January 1972 from Civil Aviation of Pakistan. The Government sponsored Airport Development Agency and Dhaka Civil Aviation merged into CAAB in 1982. The advent of satellite based *future air navigation system (FANS)* will revolutionized the safe air traffic making a new era in the global aviation. The main objective of CAAB is to establish and apply Aviation rules and regulations in Bangladesh. Its main duties are given below:

³ Based on the interview with Capt. Nazmul, GMG airlines.

1. Appropriately apply and maintain 1984's Civil Aviation rules.
2. Air traffic control and supervise all Bangladeshi airports.
3. Certifying and giving license to pilots, air traffic controllers and aircrafts.
4. Other aviation related works.

2.12.2 Bangladesh flying academy

General aviation and flying academy is the oldest pilot training center in Bangladesh. It was established in 1948. Most of the pilots of Biman Bangladesh airlines and GMG airlines took flying training from here. The training is divided into two sections, one is course training and another is flying training. But no English course is in their course outline. If any student faces a problem in speaking or pronunciation, instructors suggest that they go for outside English course.

2.12.3 Biman Bangladesh Airlines

Biman the national flag carrier of Bangladesh has started its journey from immediately after the war of independence. Despite many odds on its journey towards a long and challenging way to progress, it has been able to establish its reputation as an airline. **Biman** carried the nation's flag to 8 South Asian destinations, 6 South-East and Far-Eastern destinations, 9 destinations to Gulf and Middle-East region and 6 European and north American points. A steady progress has been made with better services ensuring increased passengers. To make its passengers feel "once Biman always Biman" the airline

has recently brought in some qualitative changes in its service concept. It has been aiming in achieving the goal of being truly international commercially viable airline of the region with its warmth and friendliness, care, safety record, traditional hospitality and comfort of the services it offered. Besides natives, many foreigners travel by Biman. They have more than hundred captains and equal number of co-pilots to operate their flights. At the time of recruitment, the pilot's take aviation subject test, I.Q test, flying test and medical test, they do not take any language test, though it is equally important. Recently, it suffers from great loss. They had to stop most of the domestic routes (except chittagong, jessore and sylhet) and some international also (New york, middle East). The reasons are, power abasement, corruption, mismanagement in schedule, etc. Biman's internal burocracy is responsible for such downfall.

2.12.4 Air parabat Airlines

Air Parabat the second private sector airline in the country had commercially started from, 11 January, 1998. The airline started flights from 30 December, 1997. Its destinations were Sylhet, Rajshahi, Chittagong, Barishal, Cox's Bazar, Shamshernagar, Ishwardi, lalmonirhat, thakurgaon and saidpur. It had stopped its operation at 1999. The main reason of their downfall was financial crisis.

2.12.5 GMG Airlines

GMG Airlines is the first private airlines in Bangladesh to continue operation; it started on 6 April 1998. Seven captains and seven first officers operate nine flights including four international routes. Recently the number is increased. Many (VVIP) and Very Important Person (VIP) of Bangladesh and other countries travel by GMG Airlines. GMG Airlines also has the same problem of pilot requirement as Biman.

GMG starts with a professional way. From the beginning they do a proper planning, market research to run their business well, in the beginning they also faced many difficulties but now they are doing very well. GMG airline's first international route was Calcutta, in 2002. Then in 2006 they starts Bangkok flight and after that Delhi, Malaysia and Nepal. They planed to increase the number of routes.

Before GMG airlines some other airlines arrived but they could not survive the reasons are unprofessional attitude, lack of proper planning, lack of experts and sound financial condition. GMG has not these deficiencies. That is why GMG survives very well, not only that GMG is very strict about time, which Biman do not have so GMG become more popular than Biman Bangladesh airlines.

2.12.6 United airlines

United Airlines starts from January 2007, but they don't starts operating flights. Its current routes will be Dhaka, Sylhet, Cox's Bazar and Chittagong.

CHAPTER III

METHODOLOGY

This chapter provides an account of the methodology of the study and discusses issues pertaining to the nature of the study design, sampling and setting, data gathering instruments, method of data collection and data analysis procedure.

3.1 Design of the Study

This research was descriptive and qualitative in nature. Its purpose was to find out whether there is a need for specific English courses for pilots and controllers. Language plays an important role in in-flight communication between pilots and controllers. Accurate English language knowledge is necessary for both of them. In our country though there is an English language course for controllers, there is no language course for pilots.

For this research, data was collected from pilots, pilot/instructors, students and a controller. Apart from pilots, pilot/instructors and a controller, data was also collected from students (trainee pilots), training at the Bangladesh Flying Academy. For this research, data was collected in informal and formal settings. Data was collected by interviews (7 subjects) and questionnaire (40 subjects). After collecting the data, they were transcribed and tabulated.

3.2 The Setting

The study was conducted in formal and informal settings. PPL (Private Pilot Licence) and CPL (Commercial Pilot License) students' data was collected from Bangladesh Flying Academy, through a questionnaire. That was in formal setting. The research assistant collected the data from the students (trainee Pilots) in the classroom. Other pilots' data was collected in the informal setting; they took the questionnaires home, completed and returned them to the research assistant. Pilots, pilot/instructors and a controller's interviews were conducted in an informal setting, that is, the committee room in Bangladesh Flying Academy, over tea and snacks. Six pilots/pilots/instructors were there and sometimes two and three expressed their opinion together. All of them were in casual mood and talked about different matters. The interviews were recorded. The interviews were held on two different days; on the first day, five pilots and pilot/instructors were there. Next day a controller and a pilot were there. That was also held in the committee room in Bangladesh Flying Academy.

3.3 Sampling

The study sample was made up of students (trainee Pilots), pilot/instructors, pilots and a controller of Biman Bangladesh Airlines, GMG Airlines, United Airlines, Bangladesh Flying Academy and Civil Aviation Authority of Bangladesh. Biman Bangladesh Airlines is the national Airlines, GMG Airlines is the only existing private Airlines in

Bangladesh, and United Airlines is about to join the aviation industry. Bangladesh Flying Academy is the only pilot training institute in Bangladesh.

The sample size for the questionnaire was 40 (20 students and 20 pilots, pilot/instructors, and a controller) among the 40 subjects, six Pilots and the controller give interviews (six pilots and one controller). They were part of the 40.

It should be mentioned that the reason of choosing samples as pilots, pilot/instructors, students and controller from Biman, GMG, united airlines and Bangladesh Flying academy and Biman Bangladesh airlines is the national airlines and GMG airlines is the only running private airlines. Besides this united airline is an upcoming airline. Moreover, Bangladesh Flying academy is the oldest and only flying training centre in Bangladesh.

PPL (Private pilot license) and CPL (Commercial pilot license) students were selected as subjects. Their opinion about English language deficiency and whether they face any problem during flying time is very important. Lack of language proficiency could be harmful for trainee pilots because of mental stress. come from various districts of Bangladesh, so local dialect can also hampers clear pronunciation. So, Students and /instructors opinions are equally important.

The subjects were divided according to the position (students, pilots, pilot/instructors and controller). Students were selected non-randomly but pilots, pilot/instructors and controllers were chose randomly. Only experienced and experts were selected as subjects.

3.4 Research Instruments

For this research, data was collected through questionnaire and interview. The interviews were recorded with a MP3 and a recorder.

3.4.1 Recordings of interview

The interviews of the pilots, pilot/instructors and the controller were recorded. Topics of the interview were ESP (English for specific purpose), aviation history, aviation language an in-flight language problems between pilots- controllers and recruitment procedures of pilot and controllers.

3.4.2 Questionnaire

The format of the questionnaire is shown in Appendix A. The questionnaire comprised both open ended and close-ended questions. Forty subjects were requested to fill up the questionnaire. Until now, no research has been conducted on this topic in Bangladesh so; the researcher had to fix the questions on her own with the help of her supervisor.

Open-ended Questionnaire

First question (Appendix A) was set just to get a general point of view. Second question (Appendix-A) is slidely focused on the research area. This question was about language and dialect. Sometime dialect becomes a barrier of language proficiency. So the

researcher set this question to know whether this factor hampers language proficiency of the pilots- controllers' communication. Third question (Appendix-A) set by the researcher was also related to the research area. Background noise in bad weather sometimes created problems. So, the researcher set this question to know if the subjects had faced this type of problem. The fourth question (Appendix-A) the researcher absolutely focused on the research area, that is, regarding the importance of English language proficiency. In the fifth question (Appendix-A), on the communication process. This question is also related to the research area and the researcher set this question to know the subjects responses , according to them what factor they feels is most important for them. In the sixth question (Appendix-A) the researcher asked about pronunciation. This question is very important for this research, the researcher set this question because pronunciation is important for pilot/controller interaction. Seventh question (Appendix-A) is the last question set for the students. This question is set to know about their ESP course. Language proficiency is very important for pilot- controller communication. So it is important for the researcher to know weather there is any ESP course in their syllabus. Questions eight and nine were only for instructors. They focused on the general problems during training period and solutions.

Close- ended question

Besides the questions, some specific information about the respondents was gathered in terms of their designation, home district, education, medium of study, language ability, etc. These were sought by the researcher to gather individual information about the



samples. Sometimes the home district, education, upbringing, etc. affects a person's accent and the ability to speak and pronounce clear accent free English.

3.5 Data Collection Procedures

The data was collected through interviews and questionnaire. Recordings were made by interviewing pilots, pilot/instructors and a controller. It was taken on two different days. The interviews were taken in an informal setting in the committee room of Bangladesh Flying Academy. On the First day, five pilots and instructors were interviewed. It is difficult to get a good number of senior pilots, instructors and controllers, together because they are very busy. So, the researcher had to wait to get them together. They (pilots, pilot/instructors, and a controller) were personally known to the researcher, that's why they agreed to give the interviews.

Pilots, pilot/instructors and the controller expressed their personal views during the interviews. All of them were senior pilots so their points of views were very important. Their personal experiences were equally important for this research. On the first day of the interview, the pilots, pilot/instructors, talked about the training procedures, about their course outline, aviation history of Bangladesh and the requirement process of pilots and controllers, etc.

On the next day a controller's interview was taken. It was very important. Generally, controllers are not allowed to give any interviews without the special permission of Civil

Aviation Authority of Bangladesh. So, the initial interviews had to be postponed because the airport authority did not give controllers permission. Then the researcher managed to get a senior member of CAAB for the interview. He was a former instructor of controllers. He talked about the controllers work process, their requirement procedures, the training process, etc. For this research, controller's point of view was very important and it would be incomplete without this interview. In that day a senior pilot's interview of was also taken.

Twenty students (trainee pilots) of Bangladesh Flying academy were given the questionnaire to fill up. The research assistant collected data from the classrooms of Bangladesh Flying Academy. He had to go several times to collect data because students were busy in either class or flying. They wrote their opinions, personal experiences and problems in the open-ended questionnaire. One response was collected through E-mail.

3.6 Data Analysis Procedures

After collecting the data, they were transcribed and tabulated. The identity of the respondents were hidden; they were referred as S1, S2, S3 ...etc. P1, P2, P3...etc. Pi1,Pi2... and ATC. Information's were compiled according to the position of the subjects. The data from the pilots, pilot/instructors and the controller was tabulated in 4.2 Table and students data was tabulated in Table 4.1 table. Then two were compared in terms of similarities and dissimilarities.

Then the researcher mixed up the data (questionnaire and recorded versions), to analysed the responses of the trainees and experts. To do the analysis accurately the researcher took help from her supervisor. The researcher analysed the data qualitatively firstly in terms of the questions in the questionnaire, than the interview questions, and lastly, according to the research questions.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter provides the results and discussion of the questionnaire and the analysis of the recordings. The results were analysed qualitatively and discussed in terms of the general findings. Finally, the findings are summarised in terms of the research questions.

4.1 Introduction

This research is a descriptive and exploratory and survey study. So the results were analysed and discussed vividly. Tables and charts were used to make the study more clear and specific. The recordings of the interview were transcribed and discussed elaborately.

4.2 Analysis of Questionnaire Data

The whole data was tabulated and analyzed. The data was tabulated into two different tables. In Table-4.1, student's information and Table-4.2, pilots, pilot/instructors and a controller's data was tabulated. The data was collected from 40 respondents, 20 students, 14 pilots, 5 pilot/instructors and a controller. In the questionnaire (Appendix-A) students and pilots answered seven questions while the pilot/instructors and a controller answered two additional questions. The questions in the questionnaire were based on - basic

communication problems, dialect, pronunciation, ESP. communication problem during bad weather, general problems of the trainees and instructors' suggestions.

Table 4.1-Students responses

Sl.	Q1	Q2	Q3	Q4	Q5	Q6	Q7
S1	X	YES	Yes they should be more friendly with the trainee pilot during bad weather	Yes	We should be more attentive with the listening skill	Yes	No
S2	At times they speak too fast and we have difficulty in understanding	Off course	Yes, specially when giving, wind direction and vector	Yes, in that way errors in communication will be reduced	Listening	Yes	Yes
S3	No problem usually, as the phraseology is set	It can be, if proper phraseology is not used	No	Yes, because it's the internationally used aviation language	To be precise	No if it can be understood	No
S4	R/T language problem	Yes	Yes	Yes. And we have a course of that	Listening	Yes	Yes
S5	Unclear pronunciation/ improper pronunciation	Yes	X	Yes-English language training is necessary as improper pronunciation may cause accident or may put other a/c in grave risk. Both the pilots and controllers should have an international standard in spoken English so that communication becomes easy.	Understanding between both the pilot and controller/ accent	Very important	No
S6	No problem face yet	No	No	No	Seriousness	Yes	For student pilot it could be but without face
S7	Unclear pronunciation	Yes	X	Yes, English language training is very necessary. We have to talk each other in flight. And many different types, language and different countries pilot are there. English is an international language so it is easy to everyone to communicate each other. So we need to a English language training	Understanding between pilot and controller	Yes it is important	X
S8	No problem face yet	Yes	No	Yes because R/T is there but I cant understand what he want to say	Seriousness	Yes	Yes we are join but

S9	Basically the accents	Sometimes	So far, I haven't flown in the bad weather	English language training is necessary for pilots and controller. Because all over the world it is in the commonly spoken language. It is the global mother tongue.	Clear listening and speaking through the radiotelephony system and attentiveness.	A good pronunciation is very important to avoid any kind of trouble in the aircraft.	without fee.
S10	None	Not really, but two people who are communicating should understand each other.	No	Yes. Not necessarily, but it is good for everyone.	Loudness and attentiveness.	Until someone understands what you, speak its okay	No
S11	Unclear and pronunciation difficult to understand very often.	No	No, I have not yet face bad weather.	Yes, this is because there must be perfect communication between pilots and controllers. It is a very vital factor.	For a pilot the most important is to understand what is being said by the controller.	Yes it is very important, because otherwise, words can be misunderstood and cause many types of mistakes even accidents.	No
S12	Unclear pronunciation of the controller.	No, I don't think it can be a factor of accidents.	No, not yet.	Yes, it is necessary for pilots.	Seriousness.	No, I don't think it is that important.	No.
S13	Sometime accents creates problem	No, I don't think.	No.	Yes in our profession we have to fly over many countries so language knowledge is necessary.	Listening	Yes, its important.	No.
S14	Unclear pronunciation of the controller.	Sometimes it can happen.	No.	Yes, it is important.	Listening and speaking.	Yes.	No
S15	Accent creates problem.	No I don't think.	No, I didn't face this type of problem.	Some time a student comes from Bengali medium, so this background becomes problematic.	Listening.	Yes.	No
S16	Sometimes controllers speak too fast.	No	No.	Language proficiency is must in our job.	Listening.	Yes.	Yes.

S17	No problem faces yet.	Yes it can be.	No. I did not flown in bad weather.	Yes. of course. Language proficiency is necessary.	Seriousness.	Yes.	No
S18	Unclear pronunciation of the controller.	Sometimes it can be a factor of accident.	No. not yet.	Yes its must.	Listening and speaking.	Yes.	R/T language
S19	X	Yes it can be a factor.	No.	Yes its necessary because communication is very important in this profession. It would be good.	Speaking ability.	Yes.	No
S20	X	Yes it changes the actual meaning.	No. I didn't fly in bad weather.		Pronunciation.	Yes. It is important.	No.



Table-4.2 Pilot, Pilot/instructors and a Controllers response

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
P1	Yes. Before PPL I face communicating problem with control tower that time they use some R/T. I did not understand. What I think it is very natural for a new student who comes from Bengal medium.	Yes sometime it can lead an acute accident. One aircraft clear for landing & another was told for holding if 2 nd aircraft pilot failed to understand the command it would lead a serious collision.	Yes. I have face this problem one time. Actually in bad weather time we give concentration for controlling the aircraft.	Yes. Because English is common R/T language in all over the world. So it should generalized for all.	I think for a good pilot knowledge of correct pronunciation with good sense of English is must.	Yes, it is very important.	Yes this course are here.		
P2	understanding of their bad or incorrect pronunciations sometimes speaking	Of course, dialect is a big factor of accident cause is understanding and sometimes We'll not able to understand what he or she is trying to say	Sometimes I faced bad pronunciation problem during bad weather. Like the controller wanted to say me something but I understood in different meaning.	Yes. I think specific (English) language training is necessary for pilots and controllers. First of all English is an international language and in flying or aviation we have do most of the studies, communication in English in world wide, so it is necessary	In communicative factor both side rite and proper and effective communication is most important.	Pronunciation is very important either pilot or controller does a miss pronunciation during flying or in any kind of communication process the whole meaning could be change. It may occur accident	no		
P3	Pilot controller miscommunication never happens.	Sometimes. it can be a factor	No, not yet.	Yes.	Correct pronunciation is very important.	Yes.	No.		

P4	Over confident (give instructions with knowing situation).	Yes, because it changes the meaning.	In airlines flying it happens because the pilot has to fly long rough.	Yes. ESP training is necessary.	Good knowledge of language.	Yes.	No.	
P5	Correct pronunciation and with proper accent.	Yes . Because it changes the actual meaning of the sentence.	Sometimes especially in Bangkok, Barma and Malaysia flight.	Of course it is necessary.	Appropriate pronunciation and accurate accent. The reason is communication plays a vital role in aviation industry.	It is very important for incorrect pronunciation in some miscommunication happens so the authority should take it seriously . we cannot imitate accent but we can improve pronunciation.	No .	
P6	Actually as an airline pilot I have mainly wrong pronunciation of controller.	Yes .it can be a factor of accident. For example: one pilot was instructed to position him self on final but he position base where another aircraft was present . there is a big chance for air to air collision.	I didn't face this problem in bad weather but one day I was about to collide with another airplane for incomplete instruction of the controller.	Yes, it is mandatory to do a language training for pilots and controllers. Main reason there is a lot of special words in R/T phraseology has which different meaning.	In some countries controller only know some R/T fixed phraseology. That time if a pilot wants to deviation, they failed to accommodate him for poor language knowledge. Most important part of R/T clear	Yes. Pronunciation is very important because of pronunciation in some controller need to repeat an instructions three to four times which is dangerous.	Yes. I have mentioned it on question number 4.	

P7	In communicating with the control tower I have faced local accents (it varies country to country)	Yes I think it can be a factor because in our country sometimes local dialect changes the meaning of the sentence.	Yes, once I faced this situation.	Yes of course it is necessary because accurate communication is the pre requisite in our job.	instruction. Accurate pronunciation.	Yes, it is very important.	No.
P8	Wrong use of R/T phraseology(emergency call action)	No, I don't think it can be a factor.	No, I didn't face this problem.	Yes.	Listening and speaking.	Yes.	No.
P9	For R/T noise sometime the instructions seemed unclear.	Not always, may be sometimes it can happen.	Yes, I had faced the situation once in Jeddah flight.	Yes Standard English is most in our profession.	I think in pilot/controller's instruction listening and speaking is important.	Yes, of course.	No.
P10	Unclear pronunciation of the controller hampers communication.	Yes especially in Arabian countries, Japan, china has this problem.	No, not yet.	Accurate pronunciation is necessary.	Accurate pronunciation and dialect free language is necessary.	Yes it is important.	No.
P11	Unclear pronunciation sometimes cause difficulties.	Now a days it can happen because of political corruption some undeserving candidates get chance as a controller.	Yes, sometimes background noise the unclear sentence.	Yes it is preferable because it teaches accent free, clear pronunciation.	Speaking.	Yes.	Yes.
P12	Unclear pronunciation of the controller creates problem.	It is important for controllers because mainly he/she gives instructions.	No.	I think a pilot has already has a language background so it is not must but would be good.	Vocabulary, and pronunciation.	Yes.	Yes.
P13	Lack of English language knowledge of the controller produce problems	Sometimes it can be a factor of accident.	No, not yet.	Yes proper communication is very important.	Listening	Yes because it changes the meaning.	No.

P14	Sometimes -bad accent of the controllers arise miscommunication.	Yes it can lead accidents.	No.	A pilot must have a knowledge of standard English.	Speaking, pronunciation And listening.	Yes it is important.	No.		
P15	Mainly pronunciation & attitude problem between controller and pilot	This is not a main problem for accident because airman language 's selected which is in English.	I did not face that type of problem . Because pilot has a scope to ask again " say again" when he will fill R/T problem.	Off course	Familiarization , experience is the main factor for better communication.	According to the training of R/T procedure.	Yes	Specially over smart trainee's the problem. (initially)	Need training language cou
P16	Sometime we do face pronunciation during communication with the control tower. This is because of lack of vocabulary and poor background of English language.	Yes sometime it may happen..	It may happen but not that significant.	Preferred though everyone in aviation can speak English but improvement will definitely help people in speaking/ pronunciation better.	Fluency, Vocabulary, Pronunciation	Yes	No	Fluency and Pronunciation.	We advise improve En taking any course outside
P17	Yes sometime they speak very fast.	May be some time when busy with emergency handling.	No communication always make shot.	Yes because most of the communications are English..	Good knowledge and study the communication procedure.	Yes	Yes	Lots of problems are seen during the training pilots like communication, controlling the a/c and general rules also.	May be language co examination.
P18	Incorrect accent and bad pronunciation changes the actual	Yes. it varies.	Yes. Sometimes in the presence of background noise,	Yes . it is must. Communication is very important.	Pronunciation is very important.	Yes .	No in our country not yet.	For Bengali medium student we	Outside course.

	meaning.		if the command is unclear it becomes dangerous to follow.	important here. Accurate pronunciation, clear accent is must.			other country like Sweden, Japan, China, ESP course have already started	face problem they have bad pronunciation and some time dialect interferences.	language code
P10	Miscommunication and unclear pronunciation.	Not in our country, but other countries like Arabian, Japanese, China etc. Yes, now a days local dialect intervenes because of government policy.	No, not yet	Yes it would be good.	Pronunciation is very important.	Yes, of course.	no	dialect	
AFC 20	Miscommunication and accent		Sometimes, in emergency situation.	Yes, it is must.	Pronunciation and dialect free sentence.	It is very important.	Yes in ATC training it is included.	Pronunciation and accent problem.	Practice

4.2 Analysis of Questionnaire Data

Analysis of the questionnaire is given below:

4.2.1 Question 1

The first question was about language problem faced by pilots. The findings (Table-4.1) suggested that mainly unclear pronunciation is the main problem faced by some of students (S5, S7, S11, S12, S14, and S18). One student (S4) faced radiotelephony language problem. Sometimes for the presence of background noise instructions become unclear. Then some controller speaks too fast to follow his instructions, it can be very dangerous because inaudible instructions can lead collision, this problem is faced by S2 and S16. S9, S13 and S15 faced accent problem. S3, S6, S8, S10, S17 did not face any communicating problem when communicate with the control tower. The reason was may be their English medium background or they did not want to express their lacking, and so they mentioned that they did not face any problem. S1, S2 and S16 did not give answer.

Eleven pilots, pilot/instructors and a controller points that (Table-4.2), unclear pronunciation is the main language problem they (P2, P5, P6, P10, P11, P12, Pi15, Pi16, Pi18, Pi19, ATC20) faced communicate with the control tower. Accent was also an important issue of miscommunication, faced by two pilots (P7, P14), one pilot/instructors (Pi18) and a controller (ATC20), because it changes the actual meaning of the sentence. P4 remarked that, sometimes over confidence creates problem. Radiotelephony problem faced by three pilots (P1, P8, P9). One pilot/instructor (Pi17) remarked that, sometimes

controllers speak very fast. P3 remarked that pilot-controller miscommunication never happens. Except P3, all other 39 subjects mentioned that pilot/controller miscommunication occurs; the various problems (pilot/controller) miscommunication, as they mentioned, could be due to unclear pronunciation, radiotelephony language problem, accent, etc.

4.2.2 Question 2

The second question was about dialect whether can be a factor of accident. nine students (S1, S2, S4, S5, S7, S8, S17, S19, S20) expressed that dialect can be a factor of accident. On the other hand nine students (S3, S6, S10, S11, S12, S13, S14, S15, S16) wrote dialect cannot be a factor of accident. S9, S14 and S18 wrote that sometimes it could be a factor of accidents.

Among 20 pilots, pilot/instructors and a controller (Table-4.2). 11 pilots, pilot/instructors and a controller (P1, P2, P4, P5, P6, P7, P10, P14, Pi16, Pi18, and ATC20) marked that it can be a factor of accident. Only four respondents (P8, P9, Pi15, and Pi19) expressed negative responses that dialect cannot be a factor of accidents. Moreover, P3, P11, P13, Pi17 remarked that sometimes it can be a factor of accidents because it changes the meaning of the word. In the aviation industry, Standard English is necessary for communication. ATC 20 informed that now a day some unqualified candidates who do not have speaking ability can get controllers job.

4.2.3 Question 3

The third question is about miscommunication faced by pilots and controllers during bad weather. Among 20 students, S1, S2 and S4 wrote that, in bad weather miscommunication could happen. Other 14 (S3, S6, S8, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19) wrote no, it could not be an issue of accident. Two students (S5, S7) did not answer the question. S9 remarked that, he/she had not flown in bad weather. Another student (S20) did the same answer that he/she did not fly in bad weather.

Among 20 respondents seven subjects (P1, P4, P5, P7, P9, P11, Pi18), remarked that, during bad weather miscommunication could happen. Other ten subjects (P3, P6, P8, P10, P12, P13, P14, Pi15, Pi17, Pi19) opinioned that, during bad weather miscommunication never happened. Pi16 and ATC expressed that, sometimes it could be a factor of accidents. But the researcher finds (from the past records of accidents) that most of the accidents in Bangladesh happened during bad weather. For example; Capt Roxana and Capt Kais died in plane, crash in 1984 .The weather was extremely bad. Then a training flight of Air Parabat crashed; two pilots died on the spot. So, here the subjects opinion was contradictory.



4.2.4 Question 4

The fourth question was about whether an specific English language course is necessary for the pilots and controllers. Here except one subject (S6), other 39 respondents felt that English language proficiency is necessary for their profession. S10, S20, P10, P12, Pi16, Pi19 remarked that, it is preferred .Instructors have a pre-conceived notion is that pilots have good speaking ability. This is a wrong conception. Most of them (S1, S2, S11, S12, S13, S14, S15, S16, S17, S18, S19, P1, P2, P3, P4, P5, P6, P7, P8, P9, P11, P13, P14, Pi15, Pi17, Pi18, ATC20 etc) feel that ESP is necessary for their job.

4.2.5 Question 5

Among 20 students (Table-4.1), nine students (S1, S2, S4, S9, S13, S14, S15, S16, and S18) wrote listening is the most important aspect of communicative factor. Besides this, four respondents (S6, S8, S6, and S12) remarked that for a pilot and controller, seriousness is the main factor. S5 expressed that pilot/ controllers' understanding is most important part in communicative factor. One student (S20) remarked that, pronunciation is the most important aspect of communicative factor .Seriousness is ok but in communicative factor the answer should be listening, speaking but the students replied wrong answer, like ; loudness and attentiveness (S10), to be precise(S3), etc. The researcher finds that, the subjects were confused about the question. May be they did not understand the question.

Among 20 respondents ten subjects(P1,P3,P5,P7,P10,P14,Pi16,Pi18,Pi18,Pi19,ATC20) remarked that pronunciation is important for their profession. Pi3 expressed that, good knowledge of language and study the communication procedure is most important factor of communication. Speaking ability is important factor, expressed by (P8, P9, P11, P12, and P14) five subjects. However, P2 expressed that effective communication is important but he did not write the reason how the communication would be effective. P2,Pi15,Pi17 remarked that, understanding between pilot and controller is the most important aspect of communicative factor.

4.2.6 Question 6

Three students (S9, S10, S12), deny that pronunciation is not important. S3 expressed that, it is not important, if the instructions can be understood. If the controller's pronunciation is unclear and incorrect the pilot would not be able to understand that instructions. Besides this, most of them feel that pronunciation is very important for pilot and controllers. Not only students but also instructors feel that pronunciation is important. All the pilots expressed that pronunciation is important for them because incorrect pronunciation may cause accident (P2). Here students' opinion complements with pilots and instructors opinion. Correct pronunciation is important for their profession.

4.2.7 Question 7

The seventh question is about ESP course in the pilot and controller training, 5 students remarked that yes (S2, S4, S6, S8, S16) they have a course on ESP. S6 expressed that, for student pilot it could be but without fee. S8 gives the same reply. The students' probably confused, ESP course with radiotelephony communication course. Moreover, other 15 students remarked that they do not have any English language course. Same replies are found in instructors responses. Controllers have to do ESP training. Four pilots (P1, P6, P11, and P12) remarked that they have a language course in their training. Among 14, only 4 pilots wrote that they have a course, and the rest said "no". The subjects' confused R/T phraseology course with ESP course because these two courses are similar.

4.2.8 Question 8 and 9

These two questions are only for the instructors. The questions are about the general problems of the trainees and the instructors suggestions (Table-4.2). Five instructors remarked that, the general problems they faced, at the time of training fresher are fluency and pronunciation (Pi15, ATC20). Pi18 expressed that for Bengali medium background trainees, the main problem is bad pronunciation. Four instructors (Pi16, Pi17, Pi18, and Pi19) marked communication factor as the main problem. Instructors suggested English language training for the weak students, two instructors Pi16, Pi18 recommended for outside English language courses and ATC20 practice. A trainee pilot have to spend more

than 1 million dollar for flying so, to solve their problem CAAB can easily hire an English language trainer to train the trainees.

4.3 Analysis of Recorded Data

The interview was conducted with subjects (ATC20, Pi17, Pi16, Pi18, P12, P5, and Pi19). The interview subjects comprised of 6 pilots, instructors and a controller. Since they give permission to mention their identity, their names and designations are given below

1. (ATC20) Ali Reza Khan. Ex Director, AERO & ATS (Aerodrome and Air traffic service) flight safety, ICAO consultant.
2. (Pi17) Captain A.N.M .Rafiqur Rahman. Director flight operation & Chief flight instructor. GMG airlines. Ex CFI, Bangladesh flying academy.
3. (Pi16) Capt. Monirul Haque Jourder. CFI. Bangladesh flying academy.
- 4.(Pi18) Capt.. Ahsanuzzaman Khan. Instructor. BFA.⁵
5. (P12) Capt. Mahamudul Huq Polash. Pilot. BFA
6. Capt. Nazmul Islam. Piiot. GMG airlines.
7. Capt. Shahabuddin Ahmed. Pilot. Biman Bangladesh airlines.

⁵ These six pilots, pilot/instructors and the controller also filled the questionnaire as well.

The descriptions of the topics are given below



4.3.1 English for specific purpose

Communication plays an important role in the aviation industry. Safe flights depend on accurate communication between pilots and controllers. The medium of communication is English language. So language proficiency is must in their job.

Some senior pilots also think in the same way. English language is necessary. According to Capt Nazmul⁶, in the past, lack of proficiency in language, caused many accidents. For example: Bombay accident, Tenerife accident(27th march,1977.location Spain. the KLM aircraft had taken off without take-off clearance, in the absolute conviction that this clearance had been obtained, which was the result of a misunderstanding between the tower and the KLM aircraft. This misunderstanding had arisen from the mutual use of usual terminology, which, however, gave rise to misinterpretation. In combination with a number of other coinciding circumstances, the premature take-off of the KLM aircraft resulted in a collision with the Pan Am aircraft, because the latter was still on the runway since it had missed the correct intersection." <http://www.flightsafety.org>) etc. Even then, the authority did not take steps. Another senior pilot Captain Rafiqur Rahman⁷ informed that ICAO feels the need of English language training; importance and ICAO authority recently announced that they will start language training from 2008.The training will be

⁶ Captain. GMG airlines

⁷ Director flight operation and Chief flight instructor . GMG airlines, Civil Aviation Authority examiner.

mandatory for all trainee pilots around the world. However, in Bangladesh, still the pilots do not have any language course. Language course should be started because pilots have to go to different destinations and many countries mother tongue is not English so unclear pronunciation and lack of language proficiency of pilot/ controller could cause accidents.

Among all the communicative factors, pronunciation is very important. Accent free accurate pronunciation is very important for aviation sector.⁷ Capt Nazmul said that, some countries like Bangkok, Malaysia, China, Russia use very accented English. Outsiders cannot easily understand their utterances. It is very dangerous could cause accidents. Arabian countries also have the same problem. Some Bangladeshi pilots and controllers have the similar problems, because accent varies from different regions of the country. Correct pronunciation is a must especially for pilot-controller interaction. A single incorrect word could be responsible for the death of many lives. In Bangladesh people from some regions of the country cannot pronounce some words like---- R, S, K, P, F, etc. In the in- flight communication, such mispronunciations can create confusion because a pilot has to follow the directions of the controller for departure, and while in the air landing. If he/she cannot communicate accurately accidents can happen. The past records of CAAB (Civil Aviation authority of Bangladesh), suggest that among all the reasons of accidents, miscommunication is also a contributing factor.

⁷ Captain, GMG Airlines

Capt Nazmul suggested that, in Bangladesh the CAAB can start specific English Language courses to teach pronunciation, phonetics, etc. Another senior pilot, Capt Polash⁹, also thinks that for his job English proficiency is very necessary. Capt Rafiqur Rahman informed that the ICAO language course will be divided into three parts: syllabus, theoretical and practical. Aviation English is different from common English, so without the knowledge of aviation, any one cannot teach this English.

Among the senior pilots, ¹⁰ one said that in Bangladesh accident caused by miscommunication never happen. At the time of admission, the authority prioritize previous language knowledge. The instructors' think that at the training period, the trainees will overcome their deficiency.

4.3.2 Aviation history in Bangladesh

The rise of private airlines in Bangladesh is the result of some changes in the government policy. It took another couple of years (from 1991- 1995) to finalize the procedures, criteria, etc for the operation. Finally, in 1995 Aero Bengal become the pioneer to fly as first private airlines in Bangladesh. However, some other companies took the initial license for airlines business but among them Air Parabat (11th January , 1998) and GMG airlines(6th April, 1998) launch their business in the aviation world. Lastly except GMG airlines all other airlines gone because of financial crisis, unprofessional attitudes, lack of experts, etc.

⁹ Captain. Bangladesh flying academy.

¹⁰ Capt Joarder. CFI , Bangladesh Flying Academy.

In Bangladesh, Flying Academy is the oldest training centre. Biman Bangladesh Airlines is the government airlines of Bangladesh. Then in the private sector, some airlines appeared like – Aero- Bengal Airlines, Air Parabat, GMG Airlines. etc. Among them GMG Airlines, running well.

Before the arrival of the private airlines, Biman was the only airlines. Not only native but also many foreigners traveled by Biman. ¹¹They have more than hundred captains and equal number of co-pilots to operate their flights. At the time of recruitment, the pilot's take aviation subject test, I.Q test, flying test and medical test. They do not take any language test, though it is equally important. Recently, Biman suffers from great loss. They had to stop most of the domestic routes like – Rajshahi, Jessore, Barishal, Ishardi and some international routes (New York, London, and Middle East) also. The reasons are, power abasement, corruption, mismanagement in schedule, etc. Biman's internal bureaucracy is responsible for such downfall.

¹²Corruption is the main factor of Biman's downfall. Excessive privilege cannot be good to anyone. Biman gives excessive opportunities to its employees. Mismanagement in the schedule is another factor of loss. Different plane has different types of maintenance procedures like- passenger load caliber, oil intake, maintenance is, etc. Sometimes in the short route they used big plane which is unnecessarily.

¹¹ Capt Shahab. Biman Bangladesh Airlines.

¹² Capt. Ahsan. BFA

In comparison with Biman¹³, GMG as a private airlines almost don't have this types of power abasement and mismanagement¹⁴GMG start with a professional way. From the beginning they do a proper planning, market research to run their business well, in the beginning they also faced many difficulties but now they are doing very well. Before GMG, some other airlines came, but unfortunately, they couldn't survive, the reason was their unprofessional business planning, financial crisis, etc.

4.3.3 Pilot and controller's requirement process

The applicant, who wants to be a pilot, must have science background, with physics and maths. The maximum Age limit is 16 and the applicant should be medically fit. In Bangladesh English language proficiency is not required but in aviation law, the candidate must have proficiency in the English language. In controller requirement process, the candidate must have Masters in physics and also have mathematical knowledge. The minimum requirements for PPL (private pilot license) is given below

For private & commercial pilot license¹⁵

1. 18 years and above
2. Medical certificate
3. HSC/ equivalent

¹³ Capt. Rafiq.GMG airlines

¹⁴ Capt. Rafiq.

¹⁵ Captain Joarder. Chief flying instructor, Bangladesh flying academy.

For airlines requirement Process

1. 22 years & above
2. Valid Medical certificate
3. HSC/ equivalent (Science)
4. 200 flying hours

For Controllers requirement Process ¹⁶

3. Masters in Physics and math's
4. Medical Certificate
3. English proficiency.

4.4 Questionnaire and Recordings

The data from the questionnaire seems to suggest that the students' responses somewhat complement the pilot/instructors responses. But in some instances the responses did not match. The reason is commercial airlines' flying differs from training flight. In response to the third question about communication problems during bad weather, most of the students replied that they do not face this type of problem because in bad weather training flights are not allowed to fly; on the other hand airlines pilot sometimes have to fly in extreme bad weather.

¹⁶ Ali Reza Khan. Ex Director, AERO & ATS (Aerodrome and Air traffic service) flight safety, ICAO consultant.

However, in question six and seven other questions students responses match with pilots. pilot/instructors responses. Like most of them feels the necessity of English language course for trainee pilots and that. Language proficiency is important for their job. Moreover, large part of samples informed that there is no specific language course on aviation English in Bangladesh for pilots, which is very important.

From the recordings of the interview, the actual situation of aviation industry is found. The subjects of the interview were informed about different aspects of aviation industry. From that data the researcher found that in the requirement process, the candidate has to give many tests like- IQ test, basic knowledge about aviation and airlines, etc but nothing about English language.

All the interviewees were senior pilots, pilot/instructors and a controller. Since they are experienced in this field for many years, their opinion is very significant. Most of them felt that language proficiency is a must and specific English language course should start as soon as possible. Only PI2 felt that the trainees have already previous language knowledge, so language course is preferred but not necessary.

From the 40 respondents, only a few, feel that language proficiency is not very important for pilots, but most of them feel its importance.

4.5 Findings in terms of Research Questions

The summary of the findings inferred from the perspective of the three research questions of the study are explained below.

After analyzing questionnaire (Table-4.1 and Table-4.2) and the transcriptions of the recordings, the researcher found in research question No.1, ESP course is necessary for pilots and controllers. English language proficiency should be mandatory for pilots and controllers, because, they have to face different speakers of English in different countries, who do not always speak or pronounce correct English. A pilot flies over international routes, and the mother tongue of the in different countries is not English. Controllers have to deal with several pilots at a time and some of those pilots are non- native speakers. In an emergency situation, language deficiency becomes dangerous. In such situation, pre-set phraseology becomes useless, because if pilots and controllers cannot communicate accurately it may lead to accidents.

So, ICAO authority take language issue very seriously, and revised their rules regarding language proficiency courses. From 2008, all pilots and controllers have to take on ESP course. In the ESP course, a so – called standard language would be taught, that is, dialect free, English. Everyone should understand this type of English quite easily.



In Bangladesh, there is no English language course or training in aviation course English. Among 40 respondents, 39 feel the necessity of such a course. They (39 subjects) feel that, they need English language training, because limited knowledge of English language (esp. aviation English) can cause death. Some trainees also have Bengali medium background, so speaking deficiency is natural. Mainly, these Bengali medium background trainees face problems.

So, in reasons to the first research question, it seems that ESP course is necessary for pilots and controllers.

The second research highlights pronunciation. During pilot/controller communication, pronunciation plays a significant role because incorrect pronunciation sometimes changes the actual meaning of a word, phrase or sentence. For pilots and controllers, accurate speaking ability is important, because they have to deal with controllers and pilots (respectively) from different countries. So, a so-called standard English language should be spoken and understood by all.

Sixth questions in the questionnaire, was about pronunciation, whether it is important or not. Among 40 respondents, except for three (S3, S10, S12), 37 subjects, (17 trainees, 20 pilots) all remarked that, pronunciation is very important.

Interference of accent and incorrect pronunciation, changes the meaning of words. In Bangladesh, people from some regions have pronunciation problem; they cannot pronounce some words like- F, S, K, etc. People forms not only Bangladesh, but also from some other countries like- Thailand, Malaysia, Middle East, Burma - have pronunciation difficulties.

So, mispronunciation is dangerous during pilot/controller interaction. It can create miscommunication and lead to collisions. So, the pilots and controllers should avoid incorrect pronunciation.

CHAPTER V

CONCLUSION

This chapter provides a brief summary of the study and then proceeds with the conclusion. The conclusion is discussed in terms of the general findings. Finally, the chapter ends with suggestions for further research.

5.1 Summary of the Study

Accurate communication plays an important role in pilot/controller's interaction. Radio and satellite systems have greatly extended plane's communicative range. In such circumstances, pilots need to communicate unambiguously to reduce the possibility of confusion in sending and receiving messages. In the 1944, Chicago conference International Civil Aviation Authority had discussed the importance of common language in aviation. Seven years later, they agreed that English should be the International language of aviation when pilots and controllers speak different languages.

However, this Research is a qualitative study. This research focus on ESP course and pronunciation are important for pilots and air traffic controllers. English language proficiency is necessary for pilot/controller interaction. Pilots have to fly over many countries'. Not all of those countries mother tongue are English. Similarly, controllers' have to communicate with several pilots at a time and they do not, always speak clear

English. So, miscommunication can happen resulting in accidents. To avoid such accidents, accurate speaking ability in English is important.

International Civil Aviation Organization is already feels the importance of English language proficiency. From 2008, a specific English language course will be introduced for pilots and controllers. However, in Bangladesh with now Civil Aviation Authority of Bangladesh has not taken any steps to solve language problem between pilots and controllers. So, the purpose of this research is to concern the CAAB to take the language proficiency issue seriously so that accidents do not occur as a result of miscommunication.

For the data collection, 40 subjects were chosen. Among them 20 subjects were trainee pilots and other 20 comprised of pilots, instructors and a controller. These subjects were from Bangladesh Flying Academy, Biman Bangladesh Airlines and GMG Airlines. Data was collected through questionnaire and interview. Forty subjects filled up the questionnaire (open- ended and close-ended questions). The interviews of six senior pilots and a senior controller were recorded. The setting of the study was formal and informal (see Methodology for details). The trainee pilots filled in the questionnaire in a formal classroom setting while the others took it home. The interviews were conducted in an informal setting in the committee room of Bangladesh Flying Academy.

After collecting the data, they were tabulated and analyzed. The data was tabulated in two different tables, students' responses in 1 table and pilots, instructors and controllers'

responses in table-2. The tables were compared in terms of similarities and dissimilarities. Then the recorded interviews were transcribed and discussed. Lastly, the findings were analyzed according to the research questions.

The first research question was whether there is a need for a specific English language course for pilots and controllers. After analyzing the questionnaire and the transcriptions of the recordings, the researcher found that, specific English language course is necessary for pilots and controllers, because, they have to face different speakers of English in different countries, who do not always speak or pronounce correct English. In an emergency, English language deficiency (especially aviation English) could lead to a dangerous situation. The second research question whether pronunciation is important for pilots and controllers. During pilot/controller communication, pronunciation plays a significant role because incorrect pronunciation sometimes changes the actual meaning of words, sentences or phrases. The findings seem to suggest pronunciation is very important for pilots and controllers.

5.2 Contribution to Research

Safety depends on pilot/controller communication. But unfortunately in Bangladesh no research has been done in aviation English language proficiency. That's why the researcher had faced many problems collecting information. So, this research work could be considered as the first of its kind in the Bangladeshi context. Anyone who wants to

further studies in aviation language or language proficiency for pilots and air traffic controllers can use this research work as a source and guide.

5.3 Practical Implication

The main purpose of this research is to concern the Civil Aviation Authority of Bangladesh (CAAB). Because, accurate communication is very important for pilot/controller interaction. But this important matter has unfortunately been ignored or overlooked by the aviation authority. Among all the reasons of accidents, miscommunication is an important factor that is overlooked by aviation authority. So, by this research the CAAB can take the miscommunication factor seriously. To decrease the number of accidents they need to take proper precautions. They should include an English language course for pilots and controllers.

Not only CAAB but also the entire airlines industry could benefit from this research. Miscommunication between pilots and controllers is one of the major issues of aviation accidents. If pilots and controllers have lack of proficiency in English language, accidents will occur. The lives of other passengers entirely depend on the pilot's hand and his/her single mistake can cause accidents. So, pilots should not overlook a single weakness in terms of English language proficiency. The reputation of the airlines also depends on pilots. CAAB and airlines business owner would be directly benefited by this research. Besides this, trainee pilots, pilots, controllers would also be benefited.

5.4 Suggestions for Further Research

This is a descriptive and exploratory study, focusing on English language proficiency for pilots and controllers. The area of the study is limited only English language proficiency. With a large number of samples, the findings may prove to be more promising.

For further study, the researcher can focus specifically on different communicative factors like pronunciation, accent, interference of dialect, etc. On the other hand, he/she can focus on Biman Bangladesh airlines or all private airlines of Bangladesh. The researcher could enlarge the number of samples to make the research rich.

5.4 Recommendations

The Civil Aviation Authority of Bangladesh (CAAB), should take English language proficiency very seriously. Because, language plays an important role in pilots and controllers profession. The language should be clear, accent and dialect free, with proper pronunciation. Most of the subjects feel in this research, that, English proficiency is important for their job. Their lives would be in danger due to pilot/controller miscommunication. So, CAAB should take the matter seriously. They could appoint an expert ESP trainer to train pilots and controllers. Moreover, a specific English language course should be made compulsory for pilots and controllers.

5.5 Conclusions

This is a descriptive and exploratory study. The main focus of this study was to find out that whether English language proficiency is important for pilots and controllers. It was found that most of the trainees, pilots, instructors and the controller feels that, English language proficiency is necessary for their job. The reason is, accurate communication is must in pilot/ controller interaction during radiotelephony communication. There are pre-set English terminologies in the aviation course outline, which are part of aviation English. Aviation English needs to be taught, it cannot be learned on its own.

Many accidents happened all over the world; among all the reasons, pilot/controller miscommunication plays a significant role. So, to decrease the rate of accident, ICAO authority should take the issue of English language proficiency very seriously. ICAO has already revised its course outline and from 2008 they will started an ESP course for pilots and controllers. However, in Bangladesh there is no language course in aviation course outline. CAAB should also follow ICAO's example and introduce English proficiency course for pilots and controllers.



REFERENCES

- Department of Transportation Regulations. (1994). *Far/Aim94*. United States of America.
- Crystal, D. (1997). *English as a global language*. London: Cambridge University Press.
- Haque, A. (1999). *How An Aeroplane Flies*. Dhaka: U.F.M. Luthfun Nahar Begum.
- Martin, I. (1992). *An Invitation to ESP*. Singapore:
- Hutchinson, T. and Waters, A (1987). *English for Specific Purposes*. United Kingdom: Cambridge University Press.
- Mathews, E. (2003). *Recent ICAO Annex Amendments Strengthen Requirements for Language Proficiency, 7-9*. ICAO. Volume: 58.
- Doherty, M. (2003). *English Language Training for Pilots, 22- 27*. Touch down. (Volume 3 Issue 2).
- Ali, S. (1994). *Message: Souvenir'94*. Dhaka.
- Ali, S. (December 1994). *50 years of ICAO (1944- 1994):19. Souvenir '94*. Dhaka.
- Alam, K. (December 1994). *Concept on Air Traffic Service: 76-77. Souvenir '94*. Dhaka.
- [http:// www.English@maycall.co.uk](http://www.English@maycall.co.uk).
- [http:// www. Aviation-esl.com](http://www.Aviation-esl.com).
- [http:// www. bbsi.co.uk](http://www.bbsi.co.uk).
- [http:// www. flight sim Aviation.com](http://www.flight sim Aviation.com)
- <http://www.flightsafety.org>

APPENDIX-A

QUESTIONNAIRE

1. What type of language problem do you face in communicating with the control tower?
(Explain elaborately)

2. Do you think dialect can be a factor of accident? (Explain elaborately)

3. Do you face any communication problems during bad weather especially in terms of mispronunciation? (Bad or incorrect pronunciation) (Explain elaborately)

4. Do you think specific (English) language training is necessary for pilots and controllers?
If yes why if not why? (Explain)

5. In communicative factor what part is most important for a pilot? (Explain)

6. What about pronunciation? Is it important? (Explain)

7. Is there any specific / ESP language course offered in the training? Especially for pilots & controllers? (Explain)

Instructors Only

1. What are the general problems you see in training pilots ?

2. What steps do you take for the trainees who have language problem?

1. NAME:

2. NATIVE DISTRICT:

3. BIRTH PLACE:

4. POSITION: TRAINEE/ INSTRUCTOR/ CAPTAIN/ CO- PILOT/ ATC

5. EDUCATIONAL QUALIFICATION:

6. MEDIUM OF STUDY: BENGALI / ENGLISH

7. WHICH DO YOU THINK IS THE ENGLISH ABILITY YOU NEED TO IMPROVE MOST URGENTLY IN YOUR WORK ----- READING / WRITING/ LISTENING/ SPEAKING

8. DO YOU HAVE ANY TYPE OF LANGUAGE TRAINING--

