FIFTH INTERNATIONAL AVIATION ENGLISH FORUM

People, Flying Machines and English

17th and 18th March 1994 PROCEEDINGS

Table of Contents

IN THE CLASSROOM

QUALIFICATIONS: THE EUROPE OF TOMORROW

MEANS AND METHODS

VISITING PARIS

Editorial

Ann Dufaux
Editor of the 5th Forum Report

The Fifth Aviation English Forum gathered in Paris in March 1994 and focused on a theme many in the field see at the heart of their concerns: the important link existing between Man, English and Flying Machines. We called for all participants' papers and most complied most graciously. The final result is this report which reflects nearly all the themes dealt with for the occasion.

The crux of the matter is that trainers and aviation professionals alike be aware of the need to master the English language in the written form in order to read technical documents, write out important messages or transcribe essential data on one hand. But on the other, as everybody knows, to communicate orally as flawlessly as possible is of paramount importance. Today, English is universally accepted as the *lingua franca.* In principle, the mastering of this medium should help enable aircraft taking off from and landing at any of the four corners of the earth to do so in the safest possible conditions. It seems obvious that aviation professionals have a vocation to care for their passengers from their port of departure to their port of arrival. Coded airspeak messages enunciated and heard by pilots and ATC alike should convey the same meaning everywhere to avoid wrong and often fatal actions. Of course, even natives can complacently and dangerously use laid back or idiomatic language instead of rigorous airspeak. New technology which heightens safety has its drawbacks too. In the ever growing population of two crew member glass cockpit pilots, the pressure to communicate in English is even greater. Indeed, the Pilot Flying and the Pilot Not Flying have to constantly check, communicate with each other and resort to the use of English «speaking» screens. Therefore, cockpit resource management is increasingly of the utmost importance. On the other hand, even if mistakes in this area are less lethal, airlines know that they will have an edge over their competitors if they improve customer care through the training of their personnel. So, company trainers help the personnel perceive

their clients' needs to consequently offer them the friendliest most efficient service possible via the medium of the English tongue. They train their personnel to interpret and respond to very different cultural signals. Today's most recent standard European tests to assess and maintain quality and European pilot licences were scrutinized. These were but some of the themes ATCs, pilots, linguists and trainers dwelt upon in the course of our two day encounter. Other more pedagogical topics such as motivation, second language acquisition or the teaching of specialized vocabulary rounded out the program.

The theme of this year's Forum responded to a widespread demand. We did take the previous Forum participants' requests into account. But without Fiona Robertson's determination and belief that we can always accomplish whatever we have set our minds to and her quest for the excellent speakers who accepted to attend, the Forum would not have taken place! The generosity of the British Council enabled us to invite our guest speakers. The CLA team was instrumental in the realization of the event, with Geraldine Vine and Joan Bellec in the registration and organizational functions. I tried to whip up a cultural program for our visitors from afar and set up a survey to help improve future events.

Finally, the CLA offered the now traditional and much appreciated regional Franche Comté cocktail buffet.

During the Forum, the Aviation English Association illustrated the growth of its network, with its new friends offering to help on future occasions, either proposing their centers as venues or suggesting themes for forthcoming seminars (to quell our members' impatience as they await the next Forum!). And of course, the network would not be without our newsletter, which is published thanks to Philip Shawcross. We do look forward to your suggestions and future participation.

So until next time, as we say in these parts «Au revoir».

Thursday 17th March **Programme**

8.00 - 9.00	FORUM	Registration
9.00 - 9.30	AGORA	Opening. M Georges Zask, Director CLA, University of Franche-Comté
9.30 - 10.45	AGORA	Dr Susan Baker,Civil Aviation Authority, United Kingdom HUMAN FACTORS IN PILOT/CONTROLLER COMMUNICATION
10.45 - 11.15		Coffee
11.15 - 12.15		(a choice between)
	AGORA	Mr John Williams, Training Manager London Air Traffic, Control Centre EXPECT WHAT YOU HEAR, HEAR WHAT YOU EXPECT
		or
	FORUM	Mr William Niggli, Swissair MOTIVATION FOR TRAINERS AND TRAINEES
12.15 - 14.00		Lunch (served in hotel restaurant)
14.00 - 15.00	AGORA	Captain Matti Sorsa THE USE OF LANGUAGE, IMPLICATIONS FOR FLIGHT SAFETY
15.00 - 16.00		(a choice between)
	AGORA	Mme Evelyne Bérard, CLA, University of Franche-Comté AFFECTIVITY IN THE LANGUAGE CLASS
		or
	FORUM	Mr De Wilde PRESENTATION OF COMPUTER SOFTWARE FOR AVIATION ENGLISH

16.00 - 16.30		Coffee
16.30 - 17.30	AGORA	M. Stéphane Corcos, Direction Générale de l'Aviation Civile EUROPEAN PILOT LICENCES
	FORUM	Mme Mirna Marincic: PILOT AND AIR TRAFFIC CONTROLLER - TWO DIFFERENT ENDS OF THE SAME LINE?
17.30 - 18.00	AGORA	The Association
18.00 - 19.00	FORUM	Mr Nick Grouse, IPSE : COMPUTER-BASED MULTIMEDIA MATERIAL
19.00	AGORA	Cocktail : Regional drinks and savouries from Franche-Comté

Friday 18th March

9.00 - 10.00	AGORA	Professor Beneke, University of Hildesheim CROSS-CULTURAL ASPECTS OF CUSTOMER CARE
10.00 - 11.00		(a choice between)
	AGORA	Mme Kitka Toncheva, Bulgaria READING AND UNDERSTANDING AVIATION DOCUMENTS or
	FORUM	Mme Carmel Godmet A SYLLABUS FOR AERODROME AND APPROACH CONTROLLERS
11.00 - 11.30		Coffee
11.30 - 12.30		(a choice between)
	AGORA	Mr William Niggli PUBLIC ADDRESS IN THE COCKPIT AND THE CABIN

		or
	FORUM	Mme Elena Antova, Bulgaria COMMUNICATION IN THE ENGLISH LANGUAGE CLASSROOM
12.00 - 14.00		Lunch
14.00 - 15.00	AGORA	Mr Jeremy Mell, ENAC HOW PEOPLE TALK ABOUT THE FLYING MACHINES
15.00 - 16.00		(a choice between two workshops)
	AGORA	Mr John Williams LACK OF PRACTICE = LOSS OF COMPETENCE
		or
	FORUM	Professor Beneke CREATING CROSS-CULTURAL AWARENESS
16.00 - 16.15		Coffee
16.15 - 17.15		(a choice between)
	AGORA	Mme Claire Pélegrin, Aéroformation COCKPIT RESOURCE MANAGEMENT
		or
	FORUM	Mr Adrian Enright, Eurocontrol ENGLISH LANGUAGE EXIT TEST FOR STUDENT AIR TRAFFIC CONTROLLERS
17.15 - 18.00	AGORA	Mr Tony Roome, CAA FEEDBACK FOR THE FUTURE: Closing comments.

HUMAN FACTORS AND COMMUNICATION IN THE WORLD OF AVIATION

ON THE JOB • PILOT/ATC

Human Factors in Pilot/Controller Communication

Dr. Sue Baker
Safety Regulation Group, UK Civil Aviation Authority

Introduction

Among its many functions, the Safety Regulation Group of the UK Civil Aviation Authority is responsible for the investigation of air traffic control (ATC) related incidents. Since 1988, the team conducting field investigations into such incidents has included a human factors specialist in recognition of the fact that an analysis of the human factors aspects of incident occurrence is essential in attempting to understand why the incident occurred. The multi-disciplinary nature of the investigation team, comprising both ATC and human factors specialists with access to pilot and engineering expertise, allows for an in depth examination of all aspects of incident occurrence. The main purpose of investigations is seen by those involved as the acquisition of sufficient data and the compilation of «lessons learned» to help prevent the occurrence of such incidents in future. The provision of feedback from investigations to the controllers and units concerned, management, trainers and system designers is, therefore, regarded as an essential feature of the investigation process.

Reporting Schemes

Controllers involved in ATC related incidents in the UK are subject to a Mandatory Occurrence Reporting (MOR) scheme administered by the Safety Data Analysis Unit (SDAU) of the Safety Regulation Group. It is also possible for controllers to file a confidential report under this scheme. In addition, the UK operates CHIRP, the Confidential Human Factors Incident Reporting Programme, administered from the RAF Institute of Aviation Medicine at Farnborough. The data gathered from CHIRP, albeit anonymous, can also provide corroborative evidence for data gathered during the investigation process.

Data Sources

Data sources utilised during field investigations can include RTF recordings and transcripts, video recordings of the relevant radar displays and, of course, visits to the units concerned and interviews with the relevant personnel.

Communication

Since ATC is essentially about communication, it is not altogether surprising that communication breakdown should figure so prominently in the occurrence of incidents or «near incidents». Despite the vast amount of data already gathered in the area of communication, such failures continue to occur with depressing frequency. Problems occur at all points in the communication chain i.e. controller to pilot, controller to controller, unit to unit and pilot to pilot. Communication difficulties can occur during a period of otherwise normal operation contributing, on occasions, to that normal operation becoming an incident. When communication falters during existing incidents or emergencies, this will exacerbate an already potentially serious situation.

a) communication during normal operation

It will come as no surprise to anyone concerned with aviation communication to learn that *readback* errors figure prominently in the catalogue of incident related communication problems and have turned many a routine interchange between controller and pilot into a potentially hazardous event. Although both pilot and controller bear responsibility for ensuing that the readback process is correctly carried out, only the controller is really in a position to «close the feedback loop». The controller has initiated the message and, with the current state of technology, is best placed to check that the message has been read back correctly.

Unfortunately, the readback situation is beset by many fairly basic «human» factors. These include expectation, forgetting, distraction, language comprehension problems, «slips of the tongue», low vigilance and even a reluctance on the part of some pilots and controllers to give or request readbacks. Technological change in the form of sophisticated data link techniques may help to alleviate this widespread problem in the future.

b) communication during incidents

Let us move on from normal operation to the situation in which an incident, for example, a loss of separation, has occurred. Data from incident investigation illustrate quite clearly that the use of the term *«avoiding action»* by UK controllers seeking to resolve a loss of separation, is the exception rather than the rule. Discussions with controllers involved in incidents suggest a number of reasons why the term is so rarely used. There is frequently a suggestion that using the phrase constitutes an admission of fault on the part of the controller concerned. Consequently, controllers frequently resort to other words or phrases to convey urgency. Some controllers have reported that they felt it possible to convey an appropriate level of urgency simply by means of vocal intonation or by the repetition of a particular instruction. Many make the point that they do not wish to cause, as they put it, unnecessary alarm on the flight deck or sudden manoeuvres by the aircraft. There appears to be a lack of awareness, in some cases, that the unambiguous nature of the term avoiding action is likely to be more effective than any other terminology in producing the desired prompt response from the pilot, especially in an emergency situation and/or where English is not the pilot's first language. Whatever the explanation, the data indicate that the use of the term is far from automatic and there are numerous examples of alternatives being used in circumstances where the words «avoiding action» would have proved much more effective.

c) communication during emergencies

Investigation of incidents and accidents has revealed a number of instances in which *«MAY-DAY»* or *«PAN»* calls have been mishandled or missed altogether. Controllers have sometimes failed to «hear» the transmission, even though it was almost certainly audible at the time. On other occasions, it would appear that «something» was heard, but was not interpreted as an emergency call. Why should this be so? MAYDAY and PAN calls are, by their very nature, an extremely rare occurrence for the majority of civil controllers. This rarity, coupled with the unanticipated arrival of the call, can lead to a sense of disbelief or even «denial» that an emergency has occurred. Many controllers, when interviewed, have described just such a feeling of disbelief - that «it can't be happening to me». One controller stated that if it really had been serious the pilot would have called again! Experience gained from interviewing controllers who have been involved in an accident strongly suggests that much of the tendency towards psychological denial stems from a feeling of being unable to cope, which, in some cases, appears to reflect inadequate training. On occasion, controllers will concentrate their attention on other «normal» aircraft on the frequency, virtually ignoring the aircraft in distress. In other words, they focus on the task they can cope with at the expense of the task for which they feel inadequate. It is no great conceptual leap to propose that better training in the handling of emergencies, while not guaranteeing a perfect response to every emergency, must go a long way toward helping the controller to cope more adequately.

Perspective

When a communication failure occurs, the problem is often one of perspective, i.e. appreciating the situation from the other controller's or pilot's point of view.

The controller who has formulated what appears to be a clear plan of action, may not appreciate that he has failed to clarify the situation to the person on receiving his transmissions. Lack of appreciation of the other person's perspective on the situation illustrates very clearly that aviation communication is more than simply a question of getting the phraseology right, although the importance of standard phraseology cannot be over estimated.

Solutions?

Clearly, there is no single solution to these communication problems. The introduction of communication via data link may certainly provide one approach to handling the problems of readbacks. However, in a system in which the human being continues to occupy a fairly central role, automation is unlikely to be the complete answer and may well bring a whole new set of problems in its wake. Improvements in training would certainly assist in alleviating some of the difficulties that exist. The use of the term «avoiding action» is a case in point. Investigations in the UK have shown that controllers who have had military experience are far more likely to use the phrase than their counterparts who have worked only in the civil world. The same tends to apply with respect to the handling of MAYDAY and PAN calls. The greater experience and familiarity that military controllers, at least in the UK, have in handling or being trained to handle, emergencies appears to pay dividends in terms of the quality of response. Significant steps have recently been taken in the UK to enhance the provision of emergency training for both student controllers and via refresher training for their more experienced colleagues. Many of the incidents also indicate a need for greater liaison and understanding of the various roles in the air traffic system.

The controller who can say «if it really was serious he'd call again» clearly has no

comprehension of handling an airborne emergency.

Similarly, the controller at a well equipped ATC unit may have little awareness of the working conditions faced by colleagues at less fortunate locations. If liaison visits are out of the question on the grounds of time or expense, training courses can still aim to provide some additional awareness of the necessity of seeing things from the other person's point of view.

Conclusions

Investigation of the human factors aspects of ATC related incidents provides an opportunity for the in depth examination of communication problems and their causality. The very fact that an incident or accident has occurred also tends to ensure that attention will be paid to the findings. Incident investigation should not, however, be considered as an end in itself. The provision of feedback to those who can effect change is essential in the prevention of future problems in a system which still places a great deal of reliance on its human components and the communication between them.

The Use of Language, Implications for Flight Safety

Captain Matti SORSA
MPhil
Finnair

• The aim of this paper is to discuss how the use of language fits into a larger framework in flight safety. Flying as a human activity is based on the so-called socio-technical systems, organisations using high technology on a large scale. Flight safety in terms of this complex system is dependent on the human and the technical component interface. These components are highly interdependent and thus operate under the joint causation.
But the flight safety deficiencies are not confined to the actions of the flight crews or other groups of the operational personnel. It is deeper than that, both in terms of space and time. There is no doubt, though, that the flight crews, for instance, commit errors including errors in the use of language. But these errors, as unsafe acts, should be understood in the systems context.

The dynamics of accident causation as described by Dr. Reason in his famous book the "Human Error", are a complex interaction between latent failures at the managerial or organisational levels and a variety of local triggering events. Preconditions of disasters typically have an "incubation period" and when the proper operational conditions take place, the occurrences (accidents and incidents) take place.

• Now, the use of language is to my mind a prime example of a latent failure in the aviation system. Using languages is not an isolated issue, but an integral part of any flight operation. No critical human action is really free from language even if there does not exist any direct use of language at some specfic time and space event like when manually controlling the aircraft. On the contrary, all actions are based on some chosen use of language be it in training, manuals or directly perceived interactional communication. The mental coding, mental models in our Central Nervous System are almost totally created through the use of language.

• In most cases, the natural language involved is some form of English or perhaps some very interesting combination of English and a local language. Personally, after more than twenty years of airline flying and having a mother tongue that is as far away from English as Piccadilly Circus is from Rantaperkiö or Äkäslompolo, my view is quite frankly that English is an unfortunate choice for the international language of aviation. My linguistic training is nonexistent and I cannot give you scientific grounds for my opinion, but my years of flying tell me that I would prefer something with less but longer words and more consonants. Alas, English is here to stay and we have to live with it. But even with English we could do much better.

• A good example of the use of language is a well-known A310 accident that took place on the 31st of July 1992 in Kathmandu.

This accident was a very complicated one, as they normally are, but for our purposes, let us observe the following recommendation of the Commission for the Accident Investigation «Controller training includes high emphasis in the ability to communicate in English.»

Based on this and other similar accidents, all the wise men of the industry agree that Controlled Flight Into Terrain (CFIT) is our major enemy. Some people are even talking about CFIT Training (like wind shear training). A misguided hope I am afraid. CFIT is conceptually of a different category. It is a broad title to many kinds of latent failures in our safety system. One of them has to do with the infrastructure in many airports in the world. Another has to with the quality level of the use of language. The CFIT problem requires a multi-faceted approach. Seen in this context, the training approach is of course a valid one.

• Another essential part of this systems approach is to check if the documentation given to the crews to make the flight operation possible allows them even a fair chance to avoid terrain. And I will argue that this particular aspect in most airlines is far from ideal. The NOTAMS, for instance: a democratic manner of presentation meaning that all letters are CAPITAL and hard to read. There is a lot of text challenging the conscience of our crew members. Actually, your choices are to start the study of this material line by line and have a small delay «for flight operational reasons» or try to catch the essential and hope that you have not left anything unnoticed or perhaps have not been able to interpret it in the first place. Obviously, there is a third possibility from the airline point of view. Have someone from the dispatch office to screen the information and to translate it into a bit more understandable language before the crew arrives. This can be done, but only if the rules of includ-ing and excluding pieces of information have been clearly agreed upon with the pilots. If that selection process is based on the day-to-day feelings of the youngest member of the office whose command of English is just developing, I would rather take my time and go through all those fascinating words and expressions.

During the flight we encounter lots of communicational problems, of course. It is obvious that the English language presents varied levels of challenges to different speakers, in great part depending on their own language. This can sometimes be amusing, but most often is not. After trying to confirm your all essential clearances for the third or fourth time with a very frustrated partner in the ATC, you probably wish you had some sort of data link to support your understanding. Is written English then any easier? Perhaps not always, but in the case of numbers, it certainly is. And numbers are very important. They keep you separated from other traffic in the form of the flight levels and directions to adopt (headings, courses and VOR radials). And as the saying goes, a mid-air can spoil your whole day.

Now, the most important of all numbers is number «two» in English as was pointed out by Fiona Robertson in the first Newsletter. Phonetically when spoken over a radio it comes awfully close to two things: «To» and «Three». When pronounced in a lazy manner it is sometimes very difficult to hear whether you were cleared to heading 020 or 030. Even more dangerous is the preposition «to». The example given by Fiona Robertson is the one that I hear every day without exception when I fly:«Cleared t(w)o five zero». Now, being at flight level 260 where do you go next? Your choice is to go to Flight Level (FL) 250 or FL 50. It all depends on your interpretation. And mind you, the normal redundancy factor called read-back does not help much. The ATC will gladly accept your saying the exact words back. Part of the problem is that everybody should always use the words «Flight Level» every time that these altitude levels are referred to. Otherwise we might even start wondering if it really was the heading (250 degrees magnetic) or perhaps the speed (250 knots) the ATC talked about. But he assured that this part of the message is routinely dropped. You might ask why people take these linguistic short-cuts. To understand this, we shall briefly study the human factor taxonomy.

• About half of the errors we humans make are so-called skill-based errors. This means that they are the automatic reactions on the senso-motor level, involving no problem solving (i.e. slips and lapses). In the use of language, this is directly related to the level and depth of the language education as well as the operational training.

About one third of the errors are rule-based. This means that people in a work-setting are consciously applying rules in routine tasks but make mistakes in doing so. Now, routine is probably the key word here. It often translates into boredom and the low level of stimulation which quite naturally means that humans start creating their own variation.

If the required use of language is badly designed, being clumsy and artificial, there is an easy target for an innovative mind. The end result is the omission of words or rephrasing expressions. This means again that hard discipline is not a very effective solution.

About only 10% or less of human errors lie on the highest level of hierarchy, they are knowledge-based involving creative elements in a new challenging situation. But it is important to note that the use of language is obviously a very critical element in this class of errors. In any new situation the human animal will act in a very complicated manner seeking for information, communicating actively and reflecting through the concepts of language, making hypotheses and trying different solutions. These highly complex mental acts in the aviational setting require that the sources of knowledge be written in a clear-cut manner, that communication be easily understandable and that other people be on sufficiently high a level in the use of language. Imagine, for instance, an emergency situation over Siberia when you have to reach an alternate airport quickly.

Consulting any text in a Route Manual is a good example of the challenges you do not need in time-limited operational decision-making.

• During an approach, an IAL chart, even the one produced by a company with the highest professional expertise (Jeppeson IAL, Frankfurt) leaves you a trifle uneasy. Let us consider for a moment what to do during an overshoot or a pull-up. Which altitude can I climb to and when? It must be either 4,000 or 5,000 feet. Another interesting exercise in the art of linguistic interpretation. A round table discussion hearing all kinds of opinions, the interpreting of the use of a comma would be due here. But unfortunately time is running out.

The tower commands the pull-up and someone blocks your radio frequency. You have effectively lost the radio contact and your airplane climbs easily 3,000 to 4,000 feet per minute. In about 30 seconds you must know where to stop your climb. Keep interpreting.

• All these problems in the use of language show one thing clearly: in the systems context the Flight Logs, the NOTAMS, the Manual texts, the load sheet designs and the checklists are something that should be taken care of well before the operational people approach the airplane. The ATC phraseology should be designed so that it is felt to be natural, handy and clear.

Once again training and discipline are very late answers to the flight safety problems. They are there to save the day when bad design is actively trying to spoil it. Mind you, it is more than common to hear, when criticizing these matters, that a bit more training would help. This is a fundamental misuse of the training concept. If the flight documents are presented cryptically, of course you can start courses dealing with cryptograms. It is possible to train crew members to understand how different communication is in Africa, Asia or in the former Soviet Union where professionals struggle with a language they have practically never heard spoken by native speakers in an everyday context. But the real answer requires something much more profound, like leaving the important messages to the data links to be confirmed. At least in the written form, we may have more of a chance of differentiating between 2 and TO.

• I have been trying to demonstrate that this industry does not serve the operational crews well with the language and documentation available. I do not know why this is the case.

Perhaps there is an overly legalistic atmosphere in our industry. As long as this and that item are legally covered and thus written in the most complicated language of lawyers you can imagine you are doing well. There is not enough respect to the limited possibilites of the flight crews to understand these complex texts and the intentions behind them. There is no concern of the physical time and space conditions involved. A busy cockpit in a dark night is no place for learned textual argumentation. If the linguistical abilities of the operational crews leave something to be desired, should we not ask as well if enough resources were allocated to their original and recurrent language instruction? Was it just assumed that it was inadequate? Were exceptional circumstances considered, not just the standard use of language? And this, I think, is the real issue. We must go to the roots of all flight safety problems, not to their final indications such as crew errors in the use of languages. We must put money where money belongs. And language is an area where relatively small investments are needed.

We must dare to look at the real causes, the latent pathogens that lie there dormant for years and just wait for the right moment to emerge on the front pages of tomorrow's newspapers.

FRANKFURT/MAIN, GERMANY

FRANKFURT/MAIN

ILS Rwy 25L

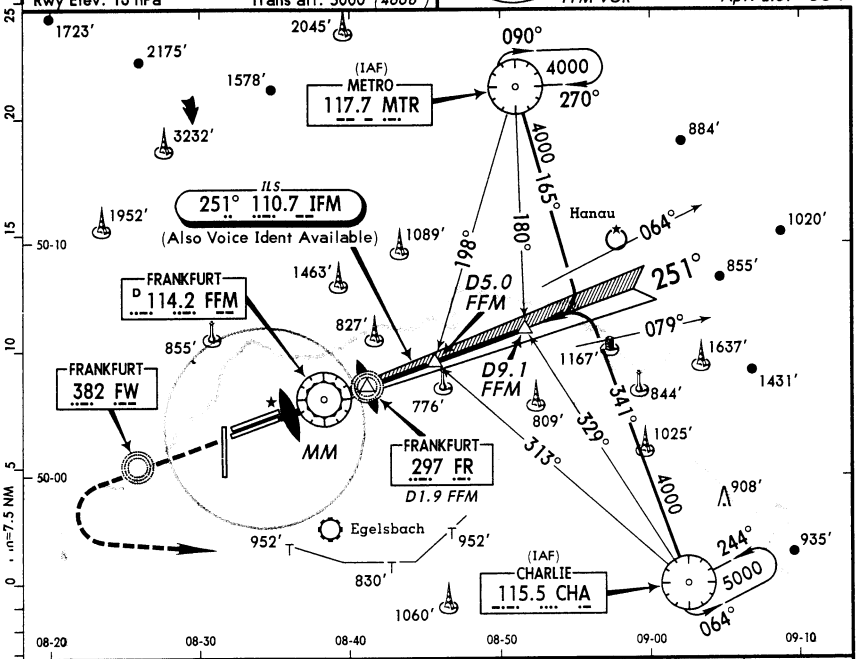
LOC 110.7 IFM

Apt. Elev 364'

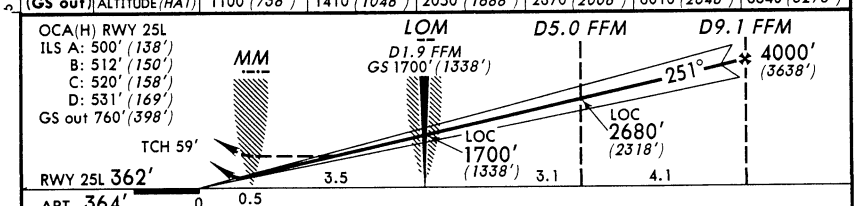
*ATIS	118.02 114.2
FRANKFURT Radar (Approach)	120.8
FRANKFURT Arrival	118.5 124.2
FRANKFURT Tower	119.9 124.85
Apron	121.7 122.05 (Civ) Ramp 121.6 (Mil)

Alt Set: hPa (IN on req) Trans level: By ATC
Rwy Elev: 13 hPa Trans alt: 5000' (4638')

MSA
FFM VOR



LOC (GS out)	FFM DME	0.0	1.0	3.0	4.0	6.0	8.0
	ALTITUDE (HAT)	1100' (738')	1410' (1048')	2050' (1688')	2370' (2008')	3010' (2648')	3640' (3278')



MISSED APPROACH: Climb STRAIGHT AHEAD until passing FW Lctr and 4000'(3638'), then turn LEFT to CHA VOR climbing to 5000'(4638').

PANS OPS 3

STRAIGHT-IN LANDING RWY 25L	ILS DA(H) 562' (200')			LOC (GS out) MDA(H) 760' (398')				CIRCLE-TO-LAND		
	FULL	TDZ or CL out	ALS out			MM out	ALS out	Max Kts	MDA(H)	
A	RVR 550m VIS 800m	RVR 720m VIS 800m	1200m	RVR 720m VIS 800m		NOT AUTH	RVR 1500m VIS 1600m	100	1050' (686')	1600m
B								135		
C								180	1250' (886')	4400m
D				1200m			2000m	205	1560' (1196')	4800m

Gnd speed-Kts	70	90	100	120	140	160
ILS GS 3.00° or LOC Descent Gradient 5.2%	377	485	539	647	755	862
MAP at MM						

CHANGES: See other side.

Expect What You Hear, Hear What You Expect. Does the former condition you for the latter?

Expect What You Hear, Hear What You Expect
John Williams
Training Manager
London Air Traffic

Expect what you hear - anticipation

Training

The subtitle for this section is anticipation and the method whereby it is achieved is through proper preparation. Preparation starts with initial training which may include language training but will certainly encompass RTF training. This will normally be coincident with professional training but the requirement to have a satisfactory level of language competence may well require an ATCO/Pilot to prove their level of English language competence prior to their professional training.

Professional training is usually one-sided in that ATCOs and Pilots tend to be trained separately, although ATCOs may be given some flying experience as part of their training Pilots may visit the local control tower during their flying training, especially on a day when they are kept grounded due to weather, but do they plug in and listen to the controller and question what they are doing? Do these visits extend to the Approach Facility or the Area Control Centre with opportunities provided to discuss mutual situations or problems that have arisen? This one-sided training can result in an incomplete understanding of the other person's job and the degree of workload involved. Instruction at this stage tends to be given by either a member of the same professional group or by a language teacher. From this, it may be seen that both pilots and controllers can be trained in their own profession with limited understanding of the other's task.

Understanding

Any heightening of the understanding between the two professional groups will improve the situation when the communication and comprehension between each other is necessary. An explanation of the meaning behind the RTF calls and the reason for it can be useful to both sides. Complicated RTF tends to be controller originated, so there would appear to be great benefit to pilots to visit ATC unit. Likewise, controllers will benefit from attendance at simulator sessions for pilots.

There are significant benefits to be gained from using live RTF tapes and video recordings, where these are available: to set the scene; familiarise the participants with specific procedures; to explain why particular RTF phrases are used; and what is required of the pilot at that stage of flight. Likewise, the flight crew can explain what is happening on the flight deck at that particular time and what they are expecting.

There are additional gains from the use of live tapes in that they have background noise on them and also there can be a wide range of dialects and accents. In Britain, we suffer from controllers who are unable to understand non-English speakers on the RTF as the whole of their training has been carried out using instructors and simulator pilots whose mother tongue is English.

Briefing is the means whereby we can prepare ourself to be able to anticipate what will occur and what may occur during our tour of duty. It is a waste of the time and effort put into our training if we do not put an appropriate time into preparing ourself for the flight or the controlling position that we shall be operating.

How often, or to what extent, does RTF Phraseology enter our minds when we carry out our pre-duty/flight briefing?

It is interesting to note that frequently it is left to the interpretation of the pilot or controller when a change occurs, on how the change will affect their normal pattern of working and if it will result in a change of phraseology.

Experience

Experience can either come as our familiarity with a particular route/controller position increases or as a result of the length of time that a person has carried out the task.

By repeating a route, situation or control position, we reinforce things previously learnt and gradually build up in our long-term memory the details of what occurs and it becomes a routine occurrence and, at some point, becomes automatic.

For the pilot, it can be done by briefing, simulation or ensuring that at least one of the two pilots has experience of the route/aircraft.

There is no shortcut method to gaining experience - it has to take time.

Hear what you expect - assumption

Can we have too much anticipation such that it pre-conditions us and so leads us to act incorrectly? This can happen in everyday contact, so why not in our air/ground communications?

Learning

Learning Domains	
Skill based	(Psychomotor)
Rule based	(Cognitive)
Knowledge based	(Cognitive)
Attitude	(Affective)

Skill-based behaviour

Comprise routines or motor programmes learnt with practice. They are executed without conscious thought: e.g., keying transmitter; writing whilst talking; inputting into a keyboard; some aspects of flying. They can be exercised at the same time as another activity that requires conscious control.

Rule-based behaviour

Routine or a procedure learnt. The components may comprise a set of discrete skills. Often documented as a list, e.g., check lists/emergency drills.

Knowledge-based behaviour

No procedures established. Evaluate information and use your knowledge to formulate a plan. Execute it and monitor its outcome.

These positive attributes of learning may lead us into the area of assumption.

The affective domain will not be covered here, as the prime attitude in the aviation business must be, and is, safety and it certainly pervades all our teaching.

Training

TRAINING CAN RESULT
IN A MINDSET

Automatic skill response so "I lift the flaps rather than the undercarriage" or "shut off the fuel rather than transfer it". As a controller, I might press the incorrect telephone button or select the wrong aircraft.

Rule based can become automatic - so I still descend aircraft to Flight Level 130 even though the base has been raised to 150 or the wrong rule is triggered.

Routine

Routine was considered an asset when the benefits of anticipating an RTF call were considered and being in a position to react accordingly. However, it can lull the participants into a false sense of security and, therefore, when one wishes to break out of the expected routine and change it, it can be more difficult and often the message contained within the call that requires the change is not heard and the acknowledgement that comes back relates to the expected call rather than the change.

Familiarity/Habit

If a skill is frequently operated in the same environment (and becomes a habit) the environment can elicit the skill without any check.

Short haul pilots frequently fly the same routes day in and day out and build up considerable experience of what is expected of them. They are familiar with the routes and the calls and so set the aircraft to achieve what is normally asked of them.

Likewise, controllers can build up the same familiarity with controlling positions and their RTF can become slick and even too rapid. They also build up a pattern in their method of working and the RTF they use, so they will not readily be able to change that routine.

Distraction

A frequent response on the flight deck is "What did he say?", whilst in the control room one can find controllers having to repeat a callsign or a message. Alternatively, all too often an incorrect response can go unchallenged. It may be that the pilot/controller is inattentive and there may have been a few sessions when an aircraft has flown through a sector without speaking to anyone or the controller has dozed during a night duty. It is more likely that there is a distraction due to those involved being busy at other things whilst the transmission is talking. The workload on a two crew aircraft flight deck can be high at times and the RTF call can be an annoyance, whilst the controller could easily be using the time that the response is received to carry out a quick telephone co-ordination with a colleague.

Neither can see the other (this may be fortunate) and so is unaware whether attention is divided or those involved can concentrate solely upon the transmission. Of course, controllers think that pilots' sole task is to 'hang on every word from the controller'; whilst pilots assume they have the undivided attention of the controller. In the air, there is considerable workload involved at those stages when the controller normally wishes to speak at start of climb, top of descent, intermediate approach.

On the ground there are frequently the times when the controller has to input to the computer; record his actions on a strip display; or co-ordinate the range of the aircraft.
Also under this heading must go preoccupation - we do have problems outside the job; or we are tired; or in light traffic or in good conditions, we relax too much.

Errors of skill do not happen to novices - they have to think what they are doing. They occur only to those with experience.

Disbelief

"He can't mean me" thinks the pilot : "It can't be turning/descending" thinks the controller. Why? We are now into the realm of knowledge-based behaviour or decision making, where we must interpret. (The reason why we still have pilots and controllers). But there are things of which we must be aware:
Data may be ambiguous.
We structure information and make inferences from it.
The inferences are based on experience and the structure of the data.
Once a decision is made, it is difficult to try a different interpretation.
If we test a hypothesis, we try positive instances not negative. We infer in accord with our wishes, hopes and desires.

Callsigns

With so many numerals being used, it is easy for transmissions to be clipped at either the start or end of the callsign and just a part of the callsign be heard. Add to these Headings, Flight Levels and Pressure Settings, is it any wonder that there is confusion?

Summary

This presentation has covered the benefits that can be gained from preparation for, before and during flight in order to anticipate what phraseology will be used and to improve the understanding between them so that they will be able to react in the appropriate manner.

It has also considered the problems that can arise from assumption which frequently arises from the routine becoming a "habit". We have considered how the types of learning associated with flying that require well established set routines which are designed to be learnt and reproduced when necessary, can lead to automatic reactions that are not relevant to the situation.

What must we do to assist in preventing the errors?

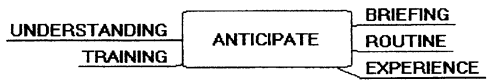
Ensure that those we train know not only the phraseology but also understand what is required of the controller and the pilot and why.

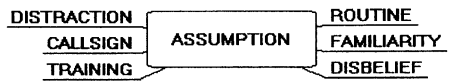
Stress the importance of readbacks and listening to the content thereof and the pitfalls that arise if we do not correct them.

Practice emergency and unusual situations and consider the likely phraseology that would go with it.

Above all, be alert, concentrate and listen to what is said.

Appendix A





DON'T EVER SUBSTITUTE

ASSUMPTION

FOR CLARIFICATION

ON THE JOB • COCKPIT CREW

The Airbus Industrie Crew Resource Management Program

Claire Pélegrin
Hélène Charmensat
Airbus Industrie

The decision to implement a specific Crew Resource Management course at the Airbus Training Center reflects the concern of Airbus Industrie for safety. From the very start, Airbus Industrie integrated human factors by giving careful consideration to ergonomy and in particular to the man/machine interface in the cockpit. However, today another facet of human factors is proving essential : the interaction and synergy of the flight crew in the cockpit. This resulted in the creation of AIM, an acronym for Aircrew Integrated Management, a further step towards integrating human factors training into transition courses, whilst taking into consideration the specific Airbus philosophy.

Why this preoccupation with human factors? Because it has been found that, while planes have become technically safer, men have proved to be the weak link in the safety chain: 70% of accidents in commercial aviation involving human error. Therefore, the next step which should decrease risk in air transport, must deal with the issue of human factors training.

CRM, or AIM in the Airbus case, is a way of using all available resources - information, equipment and people to achieve safe and efficient flight operations. Until recently, training was characterized by its focus on technical know-how and individual training. These two characteristics continue to be essential but are no longer considered sufficient to ensure safety in flight. As records are analyzed, it appears that failure in crew coordination constitutes one of the major causes of accidents. This is known in the press as «pilot error», but could often more accurately be termed breakdown in communication and failure in teamwork.

A number of major airlines already run CRM programs. However, integrating a CRM module into transition training is one way for Airbus to emphasize the importance of this issue as well as to make sure that every pilot attending a course in the training center

receives at least a familiarization with it. In most cases, it constitutes a reminder of past CRM training but, for some, it may be their first contact with such training.

The present AIM module comprises two parts: a one-day seminar taking place at the end of the ground school and a series of exercises integrated into several simulator sessions. The emphasis throughout is on the trainees' active participation and involvement through the presentation of concrete cases.

The seminar covers major CRM concepts such as crew coordination, situational awareness, error chain, communication barriers... All these are studied through interactive exercises and role play. The second part of the module consists in the application of CRM techniques in selected simulator sessions. Specific exercises on task sharing, decision making, stress etc, are included in the briefing by the instructor and, during the debriefing, their application is included in the evaluation of the session.
To better assess CRM exercises and the pilots' behavior in the cockpit, the crews are filmed with infra-red cameras installed in the simulators. During the debriefings, the video tape is played back to trainees who can assess their own performance before the tape is erased. It is important to note that, in CRM, crew performance is evaluated globally and not on an individual basis.

It must be recalled that, although everyone acknowledges the importance of CRM, there is no regulation making such training compulsory, although the most advanced regulatory authorities on this issue, the FAA, encourage such initiatives in particular in its new «Advanced Qualification Program».

Results of AIM

The first conclusions from several years of AIM are rather positive.

- Pilots attending transition training at the Airbus Training Center assess the course very positively, whether it comes as refresher training to them or as a first formal contact.

- Instructors who have all been specially trained for AIM confirm the good reception and positive consequences of such training. Furthermore, their own training in CRM techniques makes them more perceptive and efficient in their sessions, so that it certainly has an influence on the improved results observed in the final check.

- Eventual objective effects of AIM are naturally harder to control as the one positive proof of its efficiency should be the absence of accidents.

Future of AIM

The combined effect of using information from COSYNUS* to anticipate problems and introducing AIM has improved the effectiveness of Airbus training. However, continuing research shows that it may be neither desirable nor effective to try and apply CRM techniques universally, without adapting them. Pilots are as much a product of their cultural environment as the rest of the population, therefore the cultural factor must be taken into account when teaching CRM techniques. Since this question has been raised, it has become a preoccupation in training centers. Again COSYNUS can help determine the particular problems, if any, of a given culture when faced with CRM. However, human behavior is much harder to measure and control than technical performance and CRM, if not ideal, is the best tool implemented so far to help shape it.

Airbus Training has been looking into the possibility of extending its current AIM program to all categories of personnel, i.e. maintenance and cabin crew. Simultaneously, it has gained some experience in giving AIM seminars to Asian customers such as Chinese or Japanese crews. At present, the general trend is to review the existing program and turn it into modules on stress, situational awareness, synergy, communication etc. These could then be adapted to different populations by putting the emphasis selectively on some points, according to need. In this way, not only different populations such as maintenance personnel could be taken into consideration, but different cultures as well.

*COSYNUS is the trainee data bank of the Airbus Training Center.

ON THE JOB • THE CUSTOMER

The Cross Cultural Aspects of Communication in a Foreign Language in the World of Aviation

Adapted from Professeur Beneke's presentation University of Hildesheim

The safe operations of aircraft rely on the skills of a number of professionals amongst which are the cockpit crew, maintenance staff and air traffic controllers. They are dependent on the efficient management of the professional and technical systems interface, both at the initial training level and in the operational phases. It is therefore essential for them to master the processes of communication not only as vehicles of information but also as factors creating and maintaining a commitment to quality ab initio and for the duration of their professional lives.

Operating and maintenance instructions are either provided in English or in translations from English into the airline's national tongue. On the one hand, English is generally a foreign or a second language for the aviation professionals, on the other hand the quality of the translations can affect safety. Today, trainers are usually familiar with Simplified English; a reduced, simplified form of the language. It has facilitated and improved the quality of translations.

In the field of ATC, clear communication is vital. Recordings show how a less than perfect command of English has caused severe hazards and even accidents. The efficient use of the language has a decisive influence on safety in the case of emergencies. A good level of communication may prevent panic reactions and be essential for the quick evacuation of an aircraft. At the Fifth IALCO Conference (hosted by Aerolineas Argentinas in Buenos Aires), an American language trainer stressed the need for a balance between pure language and intercultural training. He referred to carefully trained Japanese pilots, first on domestic flights and then on their first international flights (the destination was San Francisco). They received additional intensive English language training with quite satisfactory final test

results, in order to prepare for the latter. Yet on their first San Francisco approach, problems occurred as they established contact with ATC. Even though they may have had difficulties understanding instructions, when asked whether they had understood, they always answered affirmatively. Yet it was shown that the US air traffic controllers used idiomatic US English and did not stick to standard phraseology, while the Japanese pilots never requested repetition, implying they had understood the messages. It was found that this behaviour reflected a cultural aspect. Complaining about deviations from standard phraseology would have implied the pilots, as impolite guests, were criticizing their hosts for using incorrect language: which in fact was their own, i.e. US English. On the other hand, it would have implied admitting their linguistic weaknesses, with the controllers listening in. To do so, would indeed be very difficult for these people, proudly wearing their company uniform.

It seems, on the other hand, that one of the factors leading to the downing of the Korean aircraft by a Russian fighter may have been a cultural problem. It appears the co-pilot had intimated to the pilot in charge, that they may have been on the wrong track. Due to hierarchical strong power distance he had not dared insist, nor had he attempted to request their position from Tokyo ATC, since that would have meant the end of his professional life. It is plausible, though not certain, that he accepted the tragic outcome.
The Japanese pilots were given assertiveness training to complement their language training in the course of a year, in order to counter the problem. Their cultural concept was remodelled, indeed their whole self concept reshaped. Thanks to their training, the pilots were equipped with the strategic skills enabling them to question a person in authority or to implicitly admit a communications problem without fearing loss of face.

Customer Care

Air traffic safety justifies the attention paid to foreign language learning. Yet airlines are more and more aware of how important it is for ground staff and cabin staff to communicate with their customers in their own tongue, which is not necessarily English. This adds to the value of their product which might otherwise be indistinguishable from their competitors'. Politeness and good service are perceived to a large extent via the medium of language. A supportive atmosphere on board is conveyed by non verbal as well as verbal means.

The scope of communication in the world of aviation thus ranges from technical and operational safety to the public image of the airlines. The latter is largely a result of communication and part of the product airlines sell and is an intangible commodity. It is not *simply* fast, economical and safe transportation from A to B.

The *product* is a service, meaning different things to different people. For some, it has to do with a warm, friendly, protective atmosphere on board. For others, it is entertainment, and even adventure and excitement. For yet others, it means not being disturbed in order to get some work done or some rest, feeling assured however that there is a service provider in the background who will provide you with that aspirin or glass of water you wish for, without making you feel guilty for requesting that service in the middle of the night.

Variation in Service Concepts: The Cross Cultural Aspect

What is seen as acceptable in one culture may be perceived as unacceptable in another. The cultural factor is being given increased attention by airlines who have begun to train their staff in intercultural communication. The main points that are examined are concepts of politeness and attention. However what is considered polite or caring behaviour may differ significantly as a result of implicit cultural deep structures as we will see with the following example.

a) understanding power distance in other cultures

We shall first examine in-flight service, that is the ordering of meals and drinks. In Western cultures the flight attendant normally asks each passenger individually what he or she would like. This implies personal exchange and eye contact in each case. But what happens in the case of a flight from Africa to Frankfurt, Germany? As a consultant for Lufthansa, I have frequently been confronted with the following type of complaint. A cabin attendant offers the usual service, asking each passenger what he or she would like. In the given case a lady is seated next to the window, a gentleman by her side appears to be her husband. The request is repeated several times, eliciting neither verbal or non verbal communication, nor eye contact. After three unfruitful attempts, the husband turns to the cabin attendant in a matter of fact way and says: «My wife does not talk to servants». Similar situations occur repeatedly on these routes. The cabin attendant, if confronted several times with this kind of problem, might react rudely with the passenger. In fact neither party understands what is going on. The gentleman from Nigeria being accustomed to servants and having paid for Lufthansa business class assumed he would be served. Power distance in a number of nations outside of the Western sphere is far greater and there is an acceptance of hierarchic distance between people in authority and the providers of services in nations of Asia, Africa or Latin America. The Nigerian gentleman expected to be served with a restrained attitude and those who served were seen not as persons but rather as providers of service. On the other hand, in countries with an Islamic background a woman will not communicate in public with complete strangers. The male communicates for her. But the perception of providers of service as servants jars Western concepts. The service giver sees himself/herself as a professional donning some elements portraying a servant's behaviour momentarily, for the role. The implicit assumption is that the cabin attendant otherwise is a citizen with the

same rights and dignity as the next person. This democratic, egalitarian assumption lies at the heart of the professional service philosophy in Western culture. So it is only when in uniform that flight attendants play the role of servants. The professional role play does not challenge the self concept of fundamentally equal status between them and the people they serve. This explains why the aforementioned experience is so shattering for Westerners. In intercultural training the interpretation of such an exchange is shown as non face threatening, nor as a personal insult. It is seen rather as dictated by different cultural assumptions. During training we teach the trainees not to take things personally, but to put them down to culture.

b) eye contact behaviour

In many Western cultures eye contact is an absolute must and seen as a polite sign of interest, attention and open communication (showing one has nothing to hide). Yet in an Arabic country, to look a boss in the eye would be to show him disrespect. A quick glance to check his reaction would suffice. That too may be changing today. If in the Western world, lack of eye contact is a sign of absence of attentiveness, openness, or interest, in Arabic or Asian countries eye contact is much more complex. Traditionally, prolonged eye contact from low status to high status individuals is seen as rude, even threatening to the high status customer. Garuda Airlines give their staff, working with Westerners, one year of training in eye contact behaviour. This implies a total reshaping of their personality. Prolonged eye contact on the part of women is seen as provocative in many cultures, thus the problems that beset relations between Western flight attendants working with people of such cultures (or the reverse!).

c) duty free sales on board

In certain cultures it is customary to touch, feel and test goods before buying them and even to invite evaluations from fellow passengers. Flight attendants must be trained to deal with such attitudes calmly.

d) use of the left hand

In Islamic and a number of Asian cultures to touch things, point to them or pass food with the left hand is strictly taboo. Yet it is standard practice for flight attendants backing down the aisle with their trolley to serve passengers left and right. Everybody has to adjust to these practical situations on board, which experienced passengers do!

Communication has to do with routine

The more routines the better. You do not have to work mentally. But deviations from what is routine are difficult to handle. I will quote the flight attendant backing down the aisle and facing the passengers with their many cultural expectations as to what makes polite behaviour. The flight attendant does not have clear indicators concerning the different passengers' exact cultural backgrounds. But if he/she did, would he/she have to switch roles with each of the passengers? Would that be authentic? In order to help communications improve, it would be useful to train in inter-cultural learning from the outset and to pursue such training.

Observing Aviation Personnel at Work: Achieving Improvement

case 1

One day an announcement was made at Hanover airport: «Due to poor visibility the flight to Stuttgart has been cancelled».

A man rushed to the counter to inquire whether this was so, to which ground staff answered «Yes» with no sign of being sorry, with no suggestion of an alternate route. He may well have been the nineteenth worried passenger to have inquired. The agent's reaction illustrates the lack of professional attitude that may be found in Germany. People will not apologize, nor will they take responsibility. They would rather pretend they had some computer hitch instead. When discussing with staff, they insist on the fact they are paid not to be compassionate but to be efficient. They will not spontaneously say: «We apologize and will do our best to help you». They consider this a role of self effacement they do not wish to play.

case 2

During a transatlantic flight an American passenger requested a drink which the flight attendant brought him without uttering a word. The passenger was expecting a standard exchange such as the following :

FA «Here's your drink, Sir!»

PAX «Great! Thanks.»

FA «You're welcome.»

The incident led to a letter of complaint. It is a case in point of cultural misunderstanding. We have already mentioned the customer's expectations. On the other hand, the German flight attendant expected a word of thanks when she brought the passenger his drink. Cultural and linguistic background or acquired elements may create cross cultural communication interference.

A German flight attendant might remember not to use «please» which is not the equivalent of «bitte», yet not know how to say: «Here you are» or find the use of «Sir»or «Madam» too deferential. Will a Western cabin attendant interpret the the non-verbal hissing sound uttered by a Hindi to request a glass of water polite or offensive? If in the US, a servant might start a conversation with a guest, in Asian culture this would be unthinkable. It is therefore important to make the cabin attendants aware of self concepts when training them and dealing with their intercultural communication problems. They should reflect on the following:

- What does this do to me?
- Do I lose my self respect?
- Is that passenger being nasty with me?
- Can I become more professional in my field?

and avoid being hurt or angered by unexpected attitudes.

During training, a 22 year old Lufthansa flight attendant wondered how it was possible to be polite with a person he did not like at all. Yet the professional role has nothing to do with feelings. A person dons a uniform and acts professionally. Perhaps US professionals come across as too slick. It is not unusual to find cashiers for example who will say «Enjoy your blouse!» or «What a nice tie!». So there is possibly a way to find a more universally acceptable attitude.

Today, airlines stress on friendliness, politeness and attention as essential elements of customer care in the course of basic orientation. Yet self respect must not be neglected in flight attendant training. The teaching of all of these elements will help enhance the public image of a company.

But how is this possible if the training is done in different parts of the world where different

cultures prevail? I referred previously to eye contact. Now let us analyse «chattiness». Whereas Singapore Airlines flight attendants are not very chatty and are discreet and gentle and remain in the background ready to serve the passenger, Aer Lingus flight attendants would be forthcoming... and chatty. Some business class passengers will seek one attitude or the other. It is all a matter of choice.

Another critical factor highlighting a cultural gap is the solicited or unsolicited service. Do you offer the passenger an unsolicited service or do you wait for the passenger to call on you?

The Importance of Indirect Communication

All English Language trainers of maintenance, ground staff and cabin and cockpit crew members are confronted with this extremely important aspect of communication. I previously mentioned the Japanese pilots who had not requested clarification. Such situations also arise in the American and European context. Accidents are caused by politeness. If one analyses politeness it is clear that it has to do with face, which is not a purely Asian invention. To illustrate my point I will refer to the two aspects of face:

negative face is found in basic claim to territory, personal reserve and the freedom of action and from imposition. For example: you would not walk up to someone and shout «Time!». To request this information you would ask something to motivate this person, such as:

«Excuse me, would you mind telling me the time?»

or

«Do you have the time, please?»

Motivating a request means respecting that person's expectation of being left alone. That is the reason why people say «Excuse me» so often. For example you will say:

«Excuse me, could you pass the salt, please?»

Whereas if you knew the person you would say:

«Could you pass the salt?»

expecting the person to do a particular act. This is also true of pilots. They expect the co-pilot to do the *routine* without having to say «Excuse me» or «could you?».

positive face has to do with consistent personality. In interacting with others this often leads to complimenting people you respect. When you say «Nice job!» or «That's a nice tie you're wearing», those are illustrations of positive face. I tend to use the latter expression to test people's reactions. According to their cultural background they will react differently. In the US people would reply «Thank you, I'm glad you like it», whereas in other cultures people might not know what to say.

negative politeness tends to prevent other people from trespassing on one's own autonomy. Such would be the case if on board a plane the person seated next to me started to smoke and I showed my annoyance.

positive politeness tends to minimize the distance existing between the speaker and the addressee so that both actors' desires appear to be the same.You would not say to your secretary «Write that !»; instead you would probably say: «Jane, would you mind writing that for me?». Such formulation minimizes your request. But here again cultures may differ fundamentally. Such was the case for Michael who was told «Michael, it might be a good

idea if you put that down in writing» Michael thought to himself : «That boss is really nice he gives me suggestions and leeway». I always try to warn German people leaving the country to work for an English employer that what they take for a suggestion is in fact an order. The use of might tends to be misinterpreted by foreigners. The following Monday to Michael's surprise the boss asked him for the report. «What report?» «I did ask you, didn't I?» Michael's reflection is that you can never trust the English who never mean what they say.

The style of indirect communication is polite. To know this enables one to adjust and cope. To illustrate the reality and importance of my point, I will quote an accident that occurred in the US. The aircraft came down with too much speed and overshot the runway, but no one was killed. From the black box this is what was heard.

Co-pilot: «Looks like we've got a tailwind here.»

Pilot: «Yeah...The flaps are lower than (not deciphered).We'll make it! Gonna have to add power.»

Co-pilot: «I know.»

That was the end of the story. However, later the co-pilot affirmed he believed the pilot had understood the meaning of his remarks and would take the appropriate action. But the captain said he had not interpreted the co-pilot's remarks to mean they were going too fast.

Conclusion

From the above it is clear that too much politeness can cause accidents. It is not enough for a co-pilot to simply make suggestions or hints to the person in charge who would not take him seriously. Therefore should we, the language trainers, not teach our trainees to be more direct?

Recent research shows that teams that function well together do not use other than direct communication. However, the weaker learners tend to resort to directness in emergency situations. So the problem is quite complex. But given its importance we must train people to be direct so that in an emergency they resort to the imperative without polite formulas coming to mind.

Today, English as the *lingua franca* must function in a new world where different cultures come together. It is our task to reflect on how to cope with this complexity.

A Syllabus for Aerodrome Controllers

Carmel Godmet
Direction de l'Aviation Civile du Sud-Ouest

The goal of the syllabus is to bring the aerodrome controllers in the south west area up to Level 4 and maintain them at that level. Level 4 is considered by ENAC to be the minimum operational level of English for practising controllers and it corresponds to a fairly good intermediate level.

Why develop a syllabus specific to aerodrome controllers?

Over 50% of aerodrome controllers in the south west area work in aerodromes where traffic in English is either minimal or seasonal. Controllers soon find that their level drops through lack of practice. Motivation is affected in that these controllers generally feel that their English phraseology is more than ample for their needs. So, as regular English language training is not mandatory, attendance of English classes often proves to be erratic, making it impossible for the teachers concerned to follow traditional course books. Hence the need for a syllabus that is flexible enough either to be used as the basis of a programme that can be tailored to suit each individual trainee and teaching situation or simply as a checklist to guide teachers in their choice of material.

How the syllabus evolved

The first step in the design of any syllabus is to proceed with a needs analysis and from there on to the definition of the goals which the trainee will hopefully have attained on completion of the syllabus. In our case, we took the goal - the attainment and maintenance of level 4 - and worked back from there, itemising the language elements which characterise this level of proficiency in English and which are relevant to the aerodrome controller's job.

In concrete terms, a working group of teachers (all with 4 to 8 years experience teaching English to aerodrome controllers) and two consultant controllers, working in four teams, analysed the contents of a random selection of 12 coursebooks which address the intermediate learner. The resulting four lists were compared in a plenary session and items maintained or rejected by general consensus.

Four problem solving tasks were then used out to test the syllabus. These tasks have successfully been used with aerodrome controllers in the past and have been found to reflect both the type of language and of communication event* characteristic of the aerodrome controller's job. The working group found considerable overlap between the type of language which occurred naturally when the above tasks were carried out by native speakers, and the items which they had selected from examination of the 12 intermediate coursebooks.

What does the syllabus contain?

The list of language items selected can roughly be divided into 4 categories:

. structures and functions
. vocabulary
. pronunciation
. general linguistic capacity.

• structures and functions

tenses

- Talking about now: *present continuous active and passive*
- Recent actions and activities: *present perfect and present tenses*
- Talking about changes, announcing news: *present perfect, still, not... yet*
- Talking about the possible future
- Making predictions - (future simple tense): *first conditional- maybe/perhaps*
- Expressing degrees of probability: *will certainly/probably etc*

modals: may, might, could

- Talking about decisions and intentions: *going to, present continuous*

future simple

- Talking about future plans: *going to*
- Talking about the past: *past simple*
- Giving an account of a given situation*
- Sequence of events: *describing, discussing sequence of events and*

activities using time expressions

- Reported statements, reporting verbs

interrogatives

- Asking for detailed description

modals

- Giving advice: *should/shouldn't - second conditional*
- Making suggestions: *could.*

- Expressing obligation, prohibition & permission: *must, have to, mustn't, can, cannot - giving rules*
- Seeking permission
- Refusing permission

functions

- Reasons: *giving reasons / explaining causes and consequences talking about cause and effect*
- Explaining purpose and precautions *(conjunctions)*
- Requesting: making appeals
- Making and replying to requests and offers
- Hedging in reply to a request
- Expressing reluctance
- Expressing a polite refusal
- Asking about and expressing preferences
- Asking for assistance
- Checking certainty
- Warning
- Expressing fear or worry
- Expressing reassurance and encouragement
- Complaining
- Reminding.

- **vocabulary**
  - Health
  - Talking about ailments
  - Aches and pains
  - Medical facilities

location
- Prepositions, phrases indicating precise location
- Geographical position

directions
- Direction prepositions, sequence adverbs
- Describing movement
- Verbs of motion

geography and the physical world
- Geographical features
- Weather and climate
- Countries and nationalities
- Describing birds

transport and travel
- Asking and explaining routes & timetables
- Describing journeys
- Asking and saying how people travel
- Asking and saying how long a journey takes
- Talking about distances

comparison

Comparison of adjectives and adverbs: superlatives

degree

too, not enough + infinitive

so, such... that.

understanding intensifying and degree adverbs

asking and saying how fast things go

expressing quantity

mass and unit

needs and requirements

technology

malfunctions, breakdowns, fires

the plane

the aerodrome

ground equipment and services

radio and navaid failures

human behaviour

anti-social, violence, unruliness

strikes

using the telephone

phrasal verbs.

• **pronunciation**

- Long and short vowels
- Perception and pronunciation of unstressed syllables
- Pronouncing English names accurately,
- Understanding English pronunciation of French place names.

• **general linguistic capacity**

- Checking understanding
- Asking for confirmation and agreement
- Dealing with misunderstandings
- Making corrections
- Asking for things without knowing the exact words - paraphrasing
- Encouraging.

Where do we go from here?

Since the content of the syllabus was first defined in November 1992, the members of the working group have come to the conclusion that the best way of implementing this syllabus is to do so with as much sublety as possible. Suggestions to come up with a course book were quickly rejected for a number of reasons, the main ones being the problems of student motivation and irregular attendance of English classes. Teachers are unanimous in their feeling that variety and fun are the keys to success. This means finding enjoyable activities that reflect the type of language tasks characteristic of the controller's job and which cover the language items in the syllabus.

Example :

Task 1 «Planet DY»

Participants are informed that their spaceship has crash landed on the planet DY and their only hope for survival is to reach a radio station situated somewhere on the planet so they can radio their mother ship for help.

They are given vital information about the planet on strips of paper (shared out among the participants). Participants pool their information and come to a decision as to which direction to take from their present position, represented by a numbered square depicting the crashed spaceship.

They must choose one of four possible directions, and, as they do so, another numbered square is provided, showing their new position, and so on until they reach the radio station, with the map of the planet gradually building up from square to square.

Suggestions

- Why don't we ...
- We could ...
- Let's ....

Stating and enquiring about obligation and possibility

- Must, can, can't

Getting/giving information

Stating intention

- We want to ...

Talking about needs

Giving opinions

I think we'll have to ...

Talking about how long it takes

Using emphatic stress

«There is water in the valleys»

Talking about geographical features

Quantity

Causal relations.

Examples of communication events aerodrome controllers may be involved in: giving instructions, checking comprehension, etc.

N.B. The items printed in italics are considered important as receptive skills only.

BELLY LANDING AT XX

- XX tower this is GBEUD.

- GBEUD.

- GBEUD **was** en route **from** *A* **to** *B*, unable to have the under-carriage extend. **I'm declaring** an emergency and **I wish to** divert to *C*.	*Past simple, position, impossibility, present progressive, preference*
- UD... you confirm you have a problem with your **landing gear?**	*Using paraphrase to check understanding*
- UD Affirm. **I am declaring** an emergency.	*Present progressive*
- UD copied. Say your altitude and about position.	
- UD I'm **twenty miles north of** *XXX* at 1,000 feet VMC and **I'd like to** position for an emergency landing.	*Geographical position, wish/preference*
- Proceed direct to *XXX*. Squawk 7020. Confirm your type of aircraft.	
- UD HR 18. **I was** on an IFR flight plan and just **came off** with *X* Control at *D*.	*Past simple: giving an account of a sequence of events*

- OK, you are at 1,000 feet and you have a problem with your landing gear. **Confirm** what is the kind of your problem.

Asking for confirmation

- UD The nose landing gear will not extend. I only have main landing gear. **I'll have to do a belly landing.**

Modal of obligation, prediction

- UD We have copied. Proceed to the field. Report field in sight.

- Will do.

- UD Confirm number of persons on board.

- UD Four on board.

- UD Four on board, roger and confirm fuel.

- UD About 30 minutes.

- Thirty minutes, roger...

- UD You intend to land with the main gear down or up?

- UD **I'm still thinking** about that. **I'll let you know.**

Present progressive and simple future

- Roger.

- UD Runway in use *XXX* is 30.

- UD Roger. That's runway 30.
- Surface wind 280 degrees 16 knots.
- UD.

- QNH 1021 and (Q)FE 1010, 1010.
- FE 1010.

- Report field in sight.

- UD **Do you have a crash strip?** I'll be blocking the main runway.

Interrogative, giving reasons, future for prediction

- UD Negative you have to land on the concrete. Secondary runway, runway 30, that's a concrete.

- UD I was thinking of your traffic, 'cause I'll be blocking the main runway.

- UD We have two runways and you will land on the secondary runway, sir.

- UD Roger. Thank you.
- UD Change frequency 131.9... Sorry 131.2, 131.2 now for UD.

- 131.2 UD.

- *XXX* this is GBEUD.

- Okay UD. Loud and clear. UD you are now **ten miles from the airfield, north of the airfield.** You'll let me know about your intentions for the main landing gear.

Geographical position

- UD Wilco. **We'll try** to let the gear down again and if it remains up and **I'm unable** to release the nose gear then **we'll land with** all three up.

Future simple for spontaneous decision
Stating impossibility

- Roger. So **if you wish you may come for a go around** and visual check of your landing gear.

Making suggestions

- Okay, roger.

- UD say your remaining fuel please.

- UD fuel remaining is about 30 minutes.

- Roger... UD have you got the field in sight?
- UD Affirm.

- Roger. You will... **you will pass** over the field and **make a low pass over** the runway 30 for landing gear check.

Making a suggestion
Explaining purpose

- Roger.

- UD. **Due to traffic on final 25, you will turn right** inbound the runway intersection.	*Giving reasons, giving directions*
- UD. Shall I maintain my present position?	
- Okay. Maintain 700 and go direct to the tower. We have a Boeing 737 on final 25 now.	
- UD Roger.	
- UD. Now you are clear of traffic. **Did you try to extend the gear?**	*Interrogative. Past simple*
- UD Affirm. **I'll do** a low pass **down the length of the runway** and try to extend the gear.	*Future simple for intentions, spontaneous decisions. Precise location or direction*
- OK Keep turning left on heading 110 you ... Okay, correction... continue like that.	
- **UD. Can you inspect the gear from your position?**	*Interrogative, modal of possibility.*
- **We are looking,** sir.	*Present progressive*
I confirm the nose gear is not extended. Do not descend below 500 feet, we have a short **final on 25. Please turn left now.**	*Directions*
- **UD left turn.**	

- UD I confirm the nose gear is not down, just very partly down.	
- UD Roger. That's its normal retracted position. **I'll land with all three gears up.**	*Future simple (intentions)*
- Okay All three gears up, okay. **Would you like to burn fuel or land as soon as possible?**	*Asking about preferences*
UD. I'm very low on fuel anyway **so I'll land as soon as possible.**	*Future simple for intentions*
- OK. Extend downwind. **I'll call you back.**	*Simple future for intentions*
- UD you proceed for final, right now. And if possible, **you will try to land in the first part of the runway, before the intersection.**	*Precise location*
- UD **I'll give it a try.**	*Future simple, spontaneous decision making*
- UD surface wind 270 degrees 10 knots gusting 14 knots. You are now clear to land on 30.	
- Clear to land.	
- UD, ten to fourteen knots.	
- UD.	
- **It's started smoking...** evacuate the aircraft.	*Present perfect*

A workshop using video and cassette recordings of incidents to consider what can be done to improve the standards of RTF usage and maintain a high level of competency. It will also consider what the effects of increasing automation will have on the communication between pilot and controller.

Lack of Practice = Loss of Competence
John Williams
Training Manager
London Air Traffic

Continuation/Emergency Training

The videos and cassette recordings are examples of some of the many problems experienced by the London Area and Terminal Control Centre and are used as part of continuation programmes to enable controllers to practice unusual and emergency situations.

Each controller is planned to carry out four hours of continuation training per year, consisting of simulator exercises and round table discussions. As the control functions involve teamwork, a team of eight controllers spend a day in the simulator taking turns in carrying out exercises and the day finishes with discussion periods when the various responses to the exercises are discussed. The simulation exercises are scripted and can include one or more examples of unusual situations. Typical scenarios include pressurisation failure; loss of one or more engines; incapacitated crew member; electrical failure; loss of radar facilities; navigation failure. The exercises have been developed with co-operation from the airlines and background tapes of typical flight deck noises are used to make the RTF more realistic.

A degree of joint training has also been carried out with controllers attending airline simulator sessions and pilots attending the ATC simulators. To ensure that the simulated aircraft reactions display the correct degree of realism, the pseudo pilots who 'fly' the

aircraft have all attended one of the local airline simulator sessions. This is an excellent example of joint training which has increased understanding between both groups of professionals.

RTF Problems

A comparison of typical problems experienced by American and UK controllers indicates considerable similarities in the two operations. The main areas of concern in the UK this last year have been pilots missing control instructions and flying through a cleared level (level bust) and controllers' inattentiveness to readbacks. Examples of these have been demonstrated.

Assumption has also been a major factor and callsign confusion is quite prevalent with many airlines using the same combination of numerals for its flights. This can be aggravated if transmissions are cut off at the end or prefixes are dropped. Problems can occur with non-national airlines when they assume that they are the sole member of their carrier flying in the particular airspace and so react to their airline prefix rather than to their actual callsign. This is not normally a problem with national carriers as they expect to have more than one of their fleet flying in the airspace.

Automation

In the American survey, another problem area was automation. The European Air Traffic system will have to consider carefully how to counteract the possible pitfalls with the introduction of more automation. Transponders on aircraft; automatic transfer of flight details between adjacent ACCs; both result in a reduction in the amount of RTF transmissions. Essential information can go unchecked; automatic transmissions of

terminal weather and pressure settings are prevalent and can result in the incorrect settings being used at the wrong phase of flight. Often, such an error is only picked up when there is a large difference between the ICAO standard setting and the actual pressure - normally in excess of 15 millibars +/- 500 feet.
Developments to improve safety have resulted in controllers relying on predictive tools to prove separation or pilots relying on the FMS to make all the decisions and then failing to monitor the outcome. A development which is causing concern at the moment is the advent of Airborne Collision Avoidance Systems; such that specific phraseology has been agreed internationally and recommended for adoption by ICAO.

This role is twofold

a) to ensure, where possible, that pilots and controllers have a clear mutual understanding of the progression of a TCAS manoeuvre.

b) to provide the means to indicate the point at which the responsibility for the separation of aircraft directly affected by the manoeuvre is transferred from the controller to the pilot and, at the completion of the manoeuvre, from the pilot to the controller.

Examples

Notification During The RA Response

Pilot: TCAS CLIMB (or DESCENT)
Controller: ROGER
Pilot: RETURNING TO (ASSIGNED CLEARANCE)

Unable to comply with an ATC clearance due to an RA

Pilot: UNABLE TO COMPLY, TCAS RA
Controller: ROGER
Pilot: TCAS conflict is resolved

Insufficient time to notify ATC

Pilot: TCAS CLIMB (or DESCENT),
RETURNING TO (ASSIGNED CLEARANCE)
Controller: ROGER (may revise ATC clearance)

Insufficient time until the RA manoeuvre is completed

Pilot: TCAS CLIMB (or DESCENT), COMPLETED
(ASSIGNED CLEARANCE) RESUMED
Controller: ROGER

Short Term Conflict Alert is the equivalent for the controller and it is necessary for such controllers to react correctly to a warning. Devices may also be available in the Control Centres which highlight instances of loss of separation.

Looking ahead, we are entering the satellite age with the Future Air Navigation System. Two way transfer between controller and aircraft without any voice communications is certainly within our grasp. Satellite RTF is likely in less intensive areas with more sophisticated computer dialogue in the busier areas.
Is non-voice communication, from start up to shut down, the future, with controllers relying on push buttons or keyboard to pass the control instructions? Are pilots and controllers to be electronic machine monitors?

I do not think so.

Motivation

William Niggli
Swiss Air Language Service

Motivation can be said to be an invisible force made visible by our actions and dealings with other people. If we, as teachers or instructors, are to be successful in motivating our students, we must first discover what will spark the inquisitiveness and interest from which that motivation is born and is then maintained. Each one of our students is a unique individual, bringing his or her own emotions, experience and perception of life into the classroom and therefore the key to each student's motivation will differ.
Each person's attitude is, to him or her at the time, the correct one and each person will solve a problem by using his or her utmost ability and resources to attain the result at that moment in time.

Our task lies in leading this wide variety of people, each motivated for their own individual reasons and each with their own background and ability, to the specific goal set by the organisation we work for. This organisation has pinpointed a particular problem - let us take, for example, the problem of the interpretation of English maintenance manuals. The idea is launched that the best solution would be for all employees concerned to have a working knowledge of English. The goal is set - «Employees are able to work with the original documents» - and a course of English lessons is organised for all the people concerned.

This is the point at which problems arise - we find one person giving in to resignation and drifting off to his own objective, another realising his own incapacity and then compensating by pursuing another goal, others surrendering to complacency. The *real* goal is not being achieved. Why? How can we avoid this? How can we effectively motivate the student who is only in the classroom because he is complying with the company's wishes, his own personal target being to keep his job for another 8 years until retirement?

This is the one who will probably fall asleep after the first half-hour.
Furthermore, we are not only confronted by differing degrees of motivation, but also by differing degrees of basic knowledge and of course personal ability.

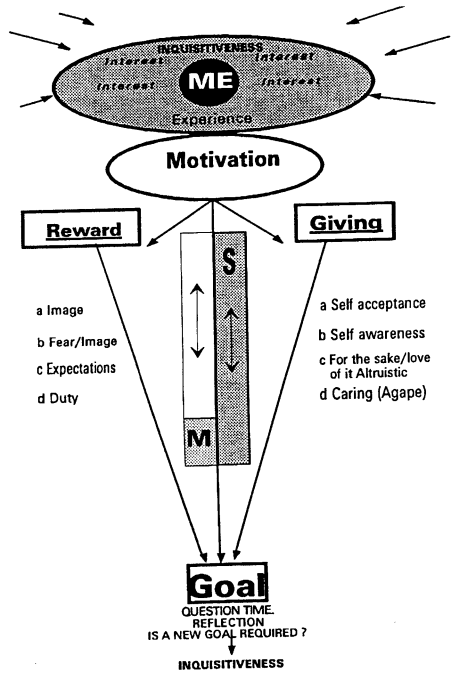
Motivation needs a reward. What that reward may be, we will study shortly, but on the way there the student needs to be spurred on by a sense of achievement. Grades, diplomas, perhaps a pay-rise, are generally offered as an encouragement but without personal motivation coming from within, these outside incentives might often not have the desired effect.

We can help our students along by giving technical terms a practical usage. For instance, students can be kept alert and interested if these new words are used in a familiar context, such as talking about their own social life or travel experiences. At Swissair we are also starting to extend the «need to know - nice to know» idea by giving flight attendants some technical knowledge too. It may not be absolutely necessary, but the more knowledge they have, the better service they can give - for example when reassuring a frightened passenger. Their own motivation will moreover be greatly improved by their being helped to feel part of the whole team.

Difficulties can arise from the composition of the class - a «Needs Assessment» having resulted in a group of students who all need to improve their English but who have very little else in common. Someone specialised in hydraulics is totally uninterested in learning the English terms connected with electronics. Any initial motivation will rapidly evaporate. Another difficulty may arise from distorted feedback. In an effort to judge the strengths and weaknesses of the course an «Evaluation of Effectiveness» may be carried out - with totally misleading results. One needs to ask oneself whether the feedback received is reliable and truthful.

The person giving you positive feedback may have his own motive for doing this - he may be in line for promotion and considers it expedient to be positive.

It can now be seen that any course or training system must, if it is to be successful, have a wider aim than the narrow, specific target that was mentioned at the beginning. Training systems ought to be viewed by organisation and individuals alike as a means of providing skills and opportunities for both material and spiritual advancement. This concept can be illustrated as follows:



At the top of the diagram our inquisitiveness and our interest can be seen leading us to motivation. The sliding scale in the middle represents our material and spiritual well-being, the desire for reward on the left being dominated by the need for material well-being and on the right by spiritual well-being. Ideally, we should attain a happy balance of both, the material being tempered by the spiritual - self-acceptance rather than the desire for a certain image, self-awareness rather than fear, doing the thing for the love of it, not because of other people's expectations, and real caring rather than duty. If a pilot is doing his job for the social image and the material gains, he will hit the crisis barrier within 10 or 15 years. By then his motivation will be gone and he can become slipshod - a dangerous development.

As we go further and finally reach our goal, whatever it may be, we must then reflect on our own inquisitiveness and ask ourselves *what else* do we wish to discover or attain, and *why*. This could be the key to real motivation.

Three important qualities of any teacher or instructor are enthusiasm, acceptance and imagination. An ability to fire the student's enthusiasm and one's own enjoyment of the subject are vital. Mastery of the subject is essential but also a desire to continue acquiring more knowledge in order to give more, whilst remaining open to new ideas. Acceptance means a total acceptance of and respect for one's students as functioning human beings, the classroom being a place of two-way communication. Finally, a teacher must show imagination, the lack of which is the scourge of many a classroom.

Any candidate for a teaching post should be tested on these three qualities; however, once accepted, he or she must have the freedom to carry out their work in a manner that they think correct in achieving the aims and goals of the organisation. Freedom, recognition and team spirit are more important to me as a teacher than technical facilities. A motivated teacher is the one who will be able to motivate his or her students and the institution that ignores this does so at its peril.

The Functions of Affective Factors in the Foreign Language Classroom

Evelyne BERARD
Centre de Linguistique Appliquée
Université de Franche-Comté

My aim is to see in what way affective factors have an impact in the learning of a foreign language and to what extent they should be accounted for in language learning.

The relation between affectivity and cognition

The first point to be made is that studies related to the role of affectivity in the learning of foreign languages are scarce, both in the field of psychology and educational sciences. However, investigations in the area of motivation have been more widespread. I personally find it difficult to draw a clear cut delineation between affectivity and motivation.

One of the reasons for the existence of this phenomenon can be found in today's development of cognitive research. It must be noted, though, that it is difficult to measure the interaction of cognitive and affective factors in language learning scientifically. However, interaction definitely does play a role and affectivity can act either as a stimulant or may on the contrary slow the process down. On the other hand, the role of affectivity is relatively important according to the process involved. For example, it has little impact on the comprehension of texts written in the mother tongue or in a foreign language, whereas it plays an essential role in the process of memorization.

Observations

We realized 2 types of observations: firstly for children between the ages of 7 and 11 who were just starting to learn a foreign language, and secondly for an audience of adult learners. The first study, done with a sample of 62 Spanish children, learning French as a foreign language, led us to investigate the reasons for which they had either positive or negative feelings towards this foreign language. We worked from a series of questionnaires and one-to-one discussions in the mother tongue.

Out of 62 children, 2 expressed negative feelings, due essentially to boredom.

60 expressed positive feelings
- 8 could not determine the reasons for this
- 14 said they were interested in the activities
- 12 stated that their motivation derived from their future needs
i.e. * travel
* profession
-10 stated they found the language easy to learn
- 5 said they enjoyed languages in general
- 4 stated they were interested in learning anything new
- 4 said they liked their teacher
- 3 stated they liked this particular language (it's «beautiful», it's «pleasant»...)

Through the analyses of these results and those obtained with a group of adult learners, we were led to the following reflections:

• firstly, positive feelings towards a foreign language for the children derived essentially from the relation existing between the learning process and the class activities, the representation of their future which had no doubt been acquired through the influence of their family and their social environment, the feeling of success they experienced (in fact, the impression that the particular foreign language they were learning was easy).

• secondly, the factors involved were linked to the pleasure of learning, the individual's positive relation to the given foreign language, to foreign languages in general and to language itself.

• thirdly, the relation to the teacher appears to have been a secondary element. However, the teacher did propose and manage class activities, and was therefore central to what was experienced in the classroom.

• finally, the main discrepancies between the groups of child and adult learners were due to the fact that the latter frequently have a negative representation of past foreign language learning experiences and relations to their personal needs (essentially professional), which are often a source of anxiety and even of mental blocks.

The teacher's role

The teacher's role is essential in 2 areas: in the management and organization of the group as well as in the implementation of motivating activities which facilitate the learning process.

This implies that basic training must include information on the way learning functions: dealing with error, how learning proceeds by stages. By informing his/her trainees the teacher will help the learners feel secure. His/her know-how should enable the instructor to manage the group in the affective relation that is created between the participants and should offer solutions to the various conflicts or blocks that tend to spring up.

On the other hand, when the teacher deals with an adult population he/she creates an atmosphere in the way he/she takes past experiences and motivation into account and in favoring success by offering one activity or another and in evaluating his/her appreciation of the learners' performance.

According to our studies the management of affectivity in language learning depends on the interaction created inside the classroom and existing between the elements born outside of the language class (the learner's psychological and sociological background, his/her

learning experience and his/her views on language learning in general), and the elements that spring up during the learning phase itself (relations between the learner and the other group members, his/her feeling of either failure or success and lastly the clarification of what has just been experienced by the whole class).

English and European Pilot Licences

Stéphane CORCOS
DGAC

Europe... or... Europe?

Several definitions of Europe can be given: Geographical Europe, ICAO, ECAC, EUROCONTROL, JAA, EU, EFTA... for aviation only. The following presentation will mainly deal with JAA and EC (non-EC JAA states are: Austria, Cyprus, Finland, Iceland, Malta, Monaco, Norway, Poland, Slovenia, Sweden, Switzerland).

1) Background on European Harmonisation

• history, actors

One of the main objectives of the construction of the EC (now the EU) is to allow the free movement of people, services and goods. This implies that pilots should, one day, be allowed to be employed by any operator within the EU, regardless of the nationality of their licence. For this purpose, the EC published a directive on «mutual acceptance of flight crew licences» in December 1991 (directive 91/670/EEC), which states that an EC state should recognise any other state's licences and ratings for use on aeroplanes of its registry, after additional «fine-tuning» requirements have been met, as deemed necessary by that state. One can easily see that this is not a full mutual acceptance of licences and ratings, since the additional requirements clause may lead to numerous interpretations, which can dilute the entire concept. Therefore, this must only be seen as the first step towards a mutual acceptance principle, which is still to be achieved.

Two alternatives then prevail:

• Either a full mutual recognition of all licences under the same name, regardless of their actual level. This alternative was not accepted, because of the potential threat to safety: in that system, every pilot would have a natural tendency to get their training (or parts of it)

where it costs the least, the exams are the easiest and the duration the shortest.

• The second alternative (the one chosen) is to try and harmonise, as much as possible, all the features of licensing and training systems: harmonisation of training, conditions of issuing of licences, conditions of revalidation of licences and ratings, harmonisation of approval of Flying Training Organisations, of instructors conducting training in those FTOs, of examiners, of flight test contents, etc.

Fortunately, ECAC (a grouping of Civil Aviation Authorities within Greater Europe: i.e. 29 countries) had for many years expressed the wish to bring closer to one another the licensing systems within its member countries, and had already started thinking about writing common minimum standards (more specific than ICAO ones), even before the EC made the decision of in depth harmonisation. However, ECAC only puts out recommendations and resolutions. Yet, within ECAC, an associated body, namely the JAA (Joint Aviation Authorities, a more restricted «club» of Authorities), already had a previous history of implementation of common regulations on a strongly harmonised basis (mainly in the airworthiness/certification field, after the experience brought by Airbus program works, when a need was seen in developing a common standard that would avoid a duplication of certification processes within the various interested countries). It was then decided that the work initially undertaken by ECAC should be taken over by the JAA (July 1992).

The EC had, by that time, made the decision not to develop its own set of regulations, but rather await a definitive JAA proposal and, unless a major obstacle was seen, adopt it as the sole code of licensing regulations for all EC member states.

2) The Harmonised Rules

• status of these rules

The JAA agreements («Cyprus arrangements») clearly stipulate that «whilst Authorities will only make a technical assessment once, the legal conclusions will still be in the hands of each individual authority».

Therefore, it can be easily understood that harmonised JAA rules will have a different value whether dealing with EC countries or non-EC countries:

An EC country is obliged to adopt the new regulation as the sole code because of an EC regulation (amended 3922) to which the rules would form an annex, whereas a non-EC JAA member state is compelled to adopt the code through the JAA arrangements (commitment to adopt what is commonly agreed)

However, this does not imply a mutual recognition within all JAA countries, and 3 cases can be identified:

1) An EC country is required to accept any pilot licence from any other EC member state, issued according to the same common technical standards and following the same administrative procedures (both conditions must be met).
2) An EC country is not obliged to accept a pilot licence from a JAA member state, non EC, mainly for social and political reasons, even though it is recognised they are of equivalent technical value.

3) A non-EC, JAA country is free to accept or refuse other JAA licences for use on their aeroplanes, with or without further requirements. However, it is likely that reciprocity principles will apply...

• participants, observers, votes

In a «UN type» meeting, state delegates are bound by their national position, already consisting of a rigid compromise reached after extensive discussions with their local parties: users, industry, manufacturers, unions, air carriers, etc. In a JAA meeting, all users, all unions, all manufacturers etc. are respectively represented at a European level, and they have their share of input at that level: the process is more efficient, and «local peculiarities» do not hamper the finding of a common compromise.

In principle, the aim of a participant is not to promote his/her country's position or regulation, but rather to reach a new, acceptable centre of gravity. The official motto is «OK, it's not entirely satisfactory to you, nor is it to anyone, but if you can live with it, the objective is reached». (Clearly, in a tyre, the centre of gravity is in a point from which everyone is at the same distance, but no one is there). Despite some critical issues where this attitude does not prevail, this explains why so many decisions are taken by common agreement, and so few are taken through a formal vote.

The participants are the authorities, and observer organisations: IAOPA Europe, Europilot (represented by IFALPA), AEA, AECMA, EBAA, ECA, ERA, EAAPS, Europe Airsports, FAI.

• broad description of the rules

The work of creation of harmonised rules did not start from scratch: a common minimum standard, ICAO Annex I, was already applied by all states, but this only describes the overall structure of the system: three licences: a PPL plus two professional licences: CPL, ATPL. These licences go with associated ratings: instrument ratings, class and type ratings, instructors' ratings.

Medical standards are also being harmonised, as well as theoretical exams (procedures for exams construction AND contents of exams). For further details the participants were requested to check draft 4 or ask specific questions at the end of the presentation.

• the current project, the NPA, the deadlines...

After 4 years of intense work, this «4th draft» was deemed complete enough to be proposed for consultation. Similar to the FAA, the JAA has a procedure called «notice of proposed amendment» , by which a text is published, comments are expected from subscribers, each of them is treated, replied to and taken into account for the drafting of the following version. The fourth draft was put out in July 1992, comments were received up to November 1992 (with four months for consultation), and we are still discussing them, at the rate of a full week meeting every 2 months. (1994 meetings were held in Lisbon in mid January, in Palma early March and are to be held in Berlin late April, and Nice in early June should be the last venue). Due to the extensiveness of comments and amendments, another full 6 month consultation is scheduled to start in October 1994, for an adoption in early 1996, and full implementation in January 1998. In the mean time, transitional rules will apply, with additional «bridges» for the conversion of old licences to the new standards, for those who

wish to do so. Those who do not wish to obtain an «exportable» licence will continue to exercise their privileges as before, under the «grandfather rights» clause.

As a consequence, the status of English that will be presented after these general considerations, is provisional: some stem from the fourth draft because they remain unaffected, others because they have not been discussed yet , finally others stem from the fifth draft (agreed amendments to date), i.e. they are really fresh news.
Yet, none of the following information can be 100% guaranteed as far as eventual applicability is concerned, because of the forthcoming NPA.

3) The role of English

• English as a tool for meetings

In the JAA agreements, no one is prevented from submitting a working paper at any level for consideration by the group. However, since JAA do not have translating human resources, this paper, unless written in English, will not be understood by more than 5 or 10 % of the participants. Therefore, it is reasonable to think that if you need to convey an idea and get your thoughts taken into account, you had better express your views in English. Nevertheless, once back home, you are allowed to translate it into your own language, if time allows.

In short, English is no different from any other language as far as its official status, but it is recognised as the most widely shared communication tool.

• English in training

It is recognised that, English being the language used in most European Airspace, a pilot will not be released in the right hand seat of an airliner on international flights unless having demonstrated his/her ability to use English in flight communications. Therefore, a training course must eventually ensure that the applicant has an appropriate level of technical English. This does not mean that the training must be conducted in English from start to finish! In the fourth draft, for those of you who have glanced through it, it was said: «before entering a course of training for CPL, IR, or ATP, the applicant shall have a sufficient knowledge of mathematics, physics and English to facilitate an understanding of the theoretical knowledge instructions content of the course». That could lead to think that all training courses should be conducted in English. This was changed, by only retaining the maths and physics part of the requirement. Now, English only appears as a final objective, the means being left open.

• English in written exams

For the time being, the regulation (draft 4) specifies that the theoretical examinations (CPL, IR, ATPL) are «given in English and other such language(s) as the JAA member State considers appropriate». However, France is clearly opposed to that, and despite the wish of the group to stay out of political matters, one can easily be convinced that this will ultimately disappear from the regulation (Mr. Toubon would certainly be cross if his colleague from the Ministry of Transport agreed with such a text!). Additionally, this would be unique in the EU that a state diploma or agreement is delivered in a language different from the official language: the aim is to promote freedom of movement, but still, no common language is imposed anywhere. Moreover, the JAA arrangements clearly

confirm that states have the ultimate legal power.
The most likely text will be: «in any language(s) considered appropriate by the Member State's Authority». (so that a state may, if it so wishes, also give the examination in English and/or in any other language...).

• **English in air to ground communications** (ATC, maintenance, marshallers, dispatchers, OPS etc.)
Nothing is written in this area in the OPS requirements, but, very recently, the Licensing Commitee agreed to require, at instrument rating level, a demonstration of knowledge of English, along the following lines:

An applicant for Instrument rating (aeroplane) shall have demonstrated the ability to use the English language in the following circumstances:

1) flight:
- radiotelephony relevant to all phases of flight, including emergency situations.

2) ground:
- all information relevant to the accomplishment of a flight, such as: pre-flight planning, weather information collection, NOTAMs, ATC Flight plan, etc.
- be able to read and demonstrate an understanding of all the contents of a technical manual (e.g. Aeroplane Flight Manual, Operations Manual...) written in English.
- use all aeronautical departure, enroute and approach charts and associated documents, written in English.

3) communications:

- be able to communicate with other crew members in English during all phases of flight, including flight preparation.

This shall be demonstrated by complying with one of the following alternative requirements:

• graduate from an instrument rating course (or ATP course) given in English

OR

• pass a specific examination as given by the competent authority after having undertaken a training course enabling the applicant to meet all the objectives listed in (1), (2) and (3) above

• **English in cockpit communications**: crew composition

JAR-OPS (technical requirements for operations of commercial air transport aeroplanes) requires that an operator should not designate as crew members persons who do not have at least a common working language. This may be French, English, Finnish, as appropriate. If the working language is no one's mother tongue, it must be kept in mind that, in case of high stress, the natural tendency is to revert to the native language (one accident report shows that even in South Africa, where the official language is English, SAA crew members could not refrain from lapsing into Afrikaans when the tension became extreme, just before impact!), in which case the «mixed» crew could represent a serious hindrance to cross-communications, hence a threat to flight safety.

• **English in documentation** (OPS manuals)

The current version of the JAR-OPS proposal states that:

«An operator must prepare the operations manual in the English language. In addition, an

operator may translate and use that manual, or parts thereof, into another language. However, (for smaller aeroplanes), operators may be authorised by the authority to prepare and use the respective OPS manuals in another language».

In other terms, that means that a working document in another language is agreed for permanent use, providing a sample written in English is on board, hidden somewhere, while the one which is widely used will never have been checked as far as technical translation accuracy (potential threat to safety). Such a need is therefore questionable.

Other facts must also be taken into consideration:

• Ground personnel and cabin crew also use the OPS manual, and may not be fluent in English.

• Those who prepare it may not speak English at all.

• The authority specialists who are going to approve it may not be fluent in English.

• The crew members may well communicate in one language (differing from English), yet they will have to refer to procedures written in another language (English): this is not a natural process.

Differing from the current practices, nothing shows that safety will ultimately be improved.

Conclusion

The French position is to advocate for a more flexible rule, as far as working language, but if our endeavours are not successful, the risk is to see a disproportionate political, national pride-style reaction, going from one extreme to another, stipulating that everything should be 100% French, even questioning old agreed practices (such as check-list items spelled out the way they are labeled on the aeroplane), and reverting to a conservative attitude. Our intent is certainly not such, at the technical level, but we must all be aware that this is the risk we run, from which we ALL might suffer.

Eurocontrol English Language Exit Test For Student Air Traffic Controllerrs

Adrian Enright
Eurocontrol

Introduction

Accepting that standard ICAO R/T phraseology has its limitations, especially in situations outside of the routine, and that English is the international language of aviation in Europe, we must also acknowledge that for a number of reasons - historical, cultural, political or whatever, the level of English among the air traffic controllers of Europe varies greatly.

With the requirement for the harmonisation of Air Traffic Services in Europe and with the knowledge that nowhere is communication more critical and misunderstanding potentially so disastrous than in air traffic control, the need to define a standard for English language in ATC came to be realised.

Background

The concept for this common standard of English among air traffic controllers was developed at the First English Language workshop held at the EUROCONTROL Institute, Luxembourg in June 1988. This workshop concluded that air traffic controllers should achieve a pre-determined, minimum level of knowledge and skills in the English language - especially listening, pronunciation and comprehension - to enable them to carry out their tasks to the extent that ATC communication contributes, in a most positive manner to the safety of air traffic.

EUROCONTROL's Training Working Group, in September 1988, encouraged the Institute to commence work on the development of appropriate tests. In 1990, the Project Supervision Team (PST) was established to monitor and guide test development. Because of its unique experience in English language testing and administration, the British Council was contracted in January 1992 to design a suitable test.

Shortly after this, the project was taken into the European ATC Harmonisation and Integration Programme (EATCHIP) under the Human Resources Domain.

EUROCONTROL maintains overall responsibility for the project and leads the PST, which is now representative of 11 States and one airforce (Czech Republic, Denmark, France, Germany and the German Air Force, Greece, Hungary, Ireland, The Netherlands, Portugal, Sweden and Switzerland). The Exit Text has now the potential to reach air traffic controllers in all 33 states of the European Civil Aviation Conference (ECAC).

Test design

The test was designed for *student* air traffic controllers with the specific aim «of determining the proficiency in English, at an agreed minimum level, which will allow air traffic controllers to carry out their tasks, ensuring safety and expedition to air traffic, in the international environment in which they work».

Because of the specific nature of the Exit Test, it is recommended that students first attain a level of proficiency in general English equivalent to such recognised tests as Cambridge First Certificate, TOEFL Band 5, or Anglo-Continental Level 4 before commencing their specialised ATC English training.

The English language training therefore, will have to be designed in such a way that the English is sufficiently broad-based and also provides adequate practical experience in the language beyond the mere goal of passing the Exit Test «because it's there». Students should be encouraged to continue learning and practising English beyond this level.

Test development

A Test Development Team, of experienced English language teachers having an extensive ATC-English background supported by test design experts from Thames Valley University, was established in Madrid. Two of the item writers were based at ENAC Toulouse and another at Palma de Mallorca. Teamwork was co-ordinated by the British Council Field Manager in liaison with EUROCONTROL.

By means of a questionnaire to states, the project set out to determine an analysis of ATC transmissions in linguistic forms and to establish ATC expectations of the test.

Authentic R/T recordings were obtained to assist in item construction which was carried out by the Test Development Team working from Madrid and ENAC Toulouse.

The initial test design was submitted to the PST (December 1992) for comment on content validation and standardisation of objectives. In February and March 1993, four versions of the test were trialled in nine states on 253 student controllers.

The PST met again (April 1993) to evaluate the trialling exercise, review test design and discuss test administration. A number of PST members had been actively involved in the trialling.

During Summer 1993, a statistical analysis of test items was conducted and modifications to test groups made prior to a limited retrialling. This was followed by the Normative Data exercise to check discrimination of the test. The test and all relevant documentation are to be handed over to EUROCONTROL at the end of March 1994.

There remains the task of establishing a system for test administration, taking into account test security, and test maintenance - to ensure that the test continues to do what it was designed to do.

It will be necessary to continue development of the test considering changes which may occur to ATC practices and the resultant consequences to ATC English.

The time scale of the project

1992

January	Contract signed between EUROCONTROL and the British Council for the development of an English test for ATC
	Project absorbed into EATCHIP (WP6210 Task 8)
March	**Needs Analysis** - by means of a questionnaire to states the project set out to determine (i) an analysis of ATC transmissions for linguistic forms, and (ii) to establish ATC expectations of the test
May	Draft Test Design
October	Item Construction - detailed preparation of each item for every test group

December	PST Meeting No.1 - presentation of outline of the test; content validation of test items; and standardisation of test objectives.

1993

January	Preparation of materials for test trialling
February/ March	Trialling of test items (four versions of test)
April	PST Meeting No.2 - Analysis of feedback on the trialling; review of test design; discussion on test administration and maintenance
May/ September	Statistical analysis of test items; modifications to test groups and preparation for limited re-trialling of selected items
October	Normative Data Exercise - test discrimination
November	PST Meeting No.3 - acceptance of final test design; study of test implementation and delivery systems.

Reading and Understanding Aviation Documents

Kitka T. Toncheva
Aviation English Instructor
Airforce Academy
Bulgaria

The reading of scientific and professionally oriented literature and regulatory documents has been a problem of primary importance in recent years. Much attention has been paid to this problem because it is closely connected to those relevant to teaching techniques and methods through which we, the teachers, can improve the efficiency of our students' reading and understanding of specialized literature in foreign languages. (1)

Communicative linguistic competence means not only grammatical and lexical knowledge of certain language rules, but also using some techniques for executing various communicative activities. Communicative functions characteristic of scientific and technological texts include mostly definitions, generalizations, instructions and descriptions. On the other hand, when reading regulatory documents in English you can easily notice that the main difficulty lies in their specific syntax, characteristic of documentary style, rather than in their semantics. The sentences are very long and complex and that leads to difficulties in recognizing simple sentences, principal and subordinate clauses.

Let us look at the example from the Jeppesen Airway Manual, in the E*mergency* section:

> *«A departing controlled IFR flight, operating in VMC, having acknowledged an initial or intermediate clearance to climb to a level other than the one specified in the current flight plan for an en-route phase of flight, and experiencing two-way radio communication failure should, if no time or geographical limit was included in the climb clearance, maintain for a period of 3 minutes the level to which it was cleared and then continue its flight in accordance with the current flight plan.»*

After analyzing this complex sentence, we can draw the conclusion that the piling up of adverbial clauses at the beginning of sentences is a common phenomenon in this kind of

publication. The teacher has to direct the efforts of his/her students to the recognition of the subject and the predicate of the sentences, which on their part could be components of a very expanded semantic group and which are the clue to the correct translation of such complicated sentences.

The reading of the Jeppesen American airway manual and the English publication «Supplement» requires special attention in the use of the modal verbs **shall, must, should, may,** etc. These verbs have to be explained and identified again, especially when used in documents of a regulatory nature:

*«All flight planes **shall be** filed at least 45 minutes prior to ETD (estimated time of departure).»*

*«Within controlled airspace VFR flights, although not subject to ATC, **must** prior to entering the airspace establish and maintain two-way radio contact with the designated ATC unit...»*

*«Prior to reaching the boundary of controlled airspace, arriving or crossing aircraft **should** request clearance from ATC.»*

*«No aircraft **may** enter or leave advisory routes without being cleared to do so by the ATC unit.»*

Passive voice is another grammatical structure that is preferred by authors of aviation documents which requires special attention. The interference of the Bulgarian language has a positive effect and passive voice components are usually well understood and translated by the trainees. The only problem that arises is when the indirect object is the grammatical subject of the sentence. In that case the English passive does not coincide with the Bulgarian passive.This is when additional explanation is especially required on the part of the teacher.

For example:

> *«Aircraft with a maximum take-off weight of 136 000 kg or greater are required to be announced as «HEAVY» on initial contact with ATC unit.»*

Another grammatical structure, difficult for Bulgarian students to translate and needing more practice is the Perfect Participle. Take this example:

> *«An aircraft **having penetrated** a restricted area without being granted permission shall leave the area immediately, report if possible, by radio the occurrence to ATC and ...» or «If, after **having been instructed** to maintain a specific heading after take-off, a pilot experiences radio failure, he shall climb on the assigned heading to the first specific altitude detailed in the clearance, maintain this heading and ....»*

where you can see combined passive voice, perfect participle and special usage of modal verbs.

A specific feature of the lexis is expressed through the formal, archaic connecting words as: **thereby, thereafter, thence, aforesaid, aforementioned, whereafter,** etc.

> *«If meteorological conditions are such that the **aforesaid** procedure cannot be applied, pilots shall proceed after take-off to the VFR holding points INTRA or LANZO.»*
>
> ***Thereafter,** a normal instrument approach procedure shall be completed.»*

These words are limited in number and the teacher can remove them in advance, proposing a list of them to his students. After having encountered them once or twice the students feel comfortable with them and begin to translate them easily best guided through context.

Another linguistic phenomenon which our students find difficult is the abundance of adverbial constructions and expressions. We found it appropriate, as with formal words, for

the teacher to scrutinize the text before, removing all of the repeated expressions. Before working on the text itself, he should write down, explain and translate the adverbial constructions. Thus translating will be quicker and comprehension improved. The following expressions cannot be avoided when reading aviation documents:

regardless of, another than, in accordance with, be subject to, so as to, in respect of, in terms of, by means of, with respect to, if practicable, by reference to, in case of, in event of, in the reference of, etc.

The useful aspect of teaching this list of expressions is that they are not confined only to aviation documents but they are also characteristic of the formal functional style of almost every branch of science. Therefore, teaching this aspect is quite worthwhile.

«Operating transported on MODE A/3, code 76/7600 ***unless otherwise*** *instructed.»*

«The vertical position of aircraft at or above transition level shall be expressed ***in terms of*** *flight levels.»*

«Proceed ***in accordance with****, or* ***according to*** *ATC instructions last received.»*

Another characteristic feature of aviation documents which should be taken into consideration when reading documents is the concept of the choice of synonyms. The words used in aviation radiotelephony are not considered appropriate enough for science or technology styles. When comparing both sources - that is documents and phraseology - it is possible to make a list of the synonyms preferred in phraseology and documents respectively:

Phraseology:	**Documents:**
clearance	permission
expect	anticipate
further	successive, onward
execute, perform	effect
possible	feasible
reply	response
part	portion
use(procedure)	employ
advise	notify
jettison, dump (fuel)	release
in use	serviceable
beginning	commencement
corrected (clearance, flight plan)	modified, revised
avoid	circumnavigate
specify (time)	allocate
remain	rest
major	principal
take part	initiate
begin	forward
send	forward
immediately	promptly

The last thing I would like to draw your attention to is the importance of abbreviations and some ways which can be used to understand and decipher them, even if they are unfamiliar. The importance of abbreviations cannot be overemphasized. They are some of the most difficult elements of specialized texts for translation and understanding. To fully understand abbreviations, readers should know their subject matter perfectly well, introducing some basic principles and rules of abbreviating which can also facilitate their task to a great extent. The following methods are very useful for deciphering abbreviations successfully:

• Content analysis: it is certain that the general character of a given text can prompt the guidelines for the subject matter. Let us study a note on an en-route chart from the Jeppesen Airway Manual: «R-10, MEAs FL 60,70 and 80 avbl by ACC». Although «R» can be **radial, restricted area,** airway **romeo**, **radar, radar** and **radial** are immediately excluded from possible guesses because radar is never accompanied by a number and radial is always given accompanied by 3 numbers. So we should choose between a restricted area and Airway Romeo. Both are possible. The next abbreviation MEA (Minimum En-route Altitude) is followed by a few Flight Levels - 60, 70, 80. This helps us decide in favor of airway Romeo, because restricted areas are not connected with MEAs in principle. The last part of the abbreviated message «avlb by ACC» is easy to decipher, bearing in mind that «available» is a very common word and the preposition «by» presupposes passive voice and a doer of the action, i.e. «ACC» (Area Control Center). Thus the full text reads: «Along airway Romeo-10, the minimum En-route Altitudes are flight levels 60,70, and 80 and they are permitted by the Area Control Center».

• The analysis of abbreviation structure is the second method for deciphering. It is useful with abbreviations with a number of elements. Some of these lexical units may include additional signs besides letters - brackets, slashes, periods, etc. Students should understand their function in order to be able to interpret the abbreviations. For example, the slash could be a boundary between the words or parts of them - «O/T» - other time, «T/O» - take-off, «C/S» - call sign, or the slash could substitute some prepositions or conjunctions - «A/G» - Air to Ground radio, «Km/h» - kilometer per hour, «O/A» - On or about. Round brackets always give additionl information or an alternative, for example: «MDA(H)» - Minimum Descent Altitude (height). A hyphen usually denotes a boundary within an abbreviated expression: «AT-VASI» - Abbreviated Tee-Visual Approach Slope Indicator. Some common components have a strictly defined place within a given abbreviation. There exist many abbreviations related to minimum altitudes or heights, so that a last component A (Altitude) can easily be foreseen:
AMA - Area Minimum Altitude; MEA - Minimum En-route Altitude, MORA - Minimum Off-route Altitude, MSA - Minimum Safe Altitude, MOCA - Minimum Obstruction Clearance Altitude, etc. The same reasoning can be applied to abbreviations, beginning with «M» for Minimum, «U» for Upper. (2)

• Analogy is another useful method of application when reading abbreviations, which is closely connected to the analysis of structure as well as to the analysis of context and is used only as an auxiliary technique. However, it does give a certain general and approximate idea of the meaning of abbreviations which in many cases could be enough. Fortunately, in recent years, the breakthrough of technology in almost every branch of science has made it necessary to develop a number of specialized dictionaries, and among them dictionaries of

abbreviations. At present in Bulgaria, there are no English-Bulgarian aviation dictionaries, but we can use English-Russian aviation and civil aviation dictionaries and some ICAO, CAA, Jeppesen publications in which there are sections with abbreviations, deciphered in English. They are useful but insufficient and we, Bulgarian teachers, should think of creating good professional translations of English terminology and even of creating Bulgarian aviation terms because we now have a lot of Russian and English sounding terms. (2)

To conclude, I would like to say a few words about some possible ways of answering the difficult linguistic problems existing today. From everything said so far you can see that teachers in specialized language training have to make great efforts to solve a problem: to gather for their students the biggest possible amount of information over a limited period of time. That task requires thorough linguistic knowledge of functional style in general and a thorough command of the subject matter of aviation. Another alternative, enabling to fulfill the task, is to deal with it in a diametrically opposite way to the aforementioned, that is to say through the use of Simplified English (SE). I learned about SE in the Aviation English Association Newsletter of October 1993. The idea struck me as very interesting. Its achievement appears to be difficult, but not impossible. One cannot help but hope that when all the specialists involved in aviation English unite and coordinate their efforts, the results will be stimulating.

Conclusion

I have tried to shed some light on a number of major problems students reading and translating authentic aviation materials are faced with. I have suggested some methods for overcoming these difficulties and also pointed out some important aspects to take into consideration before attempting to use materials for reading.

References

(1) Avdgieva M., Review on «Text Linguistics and Teaching of English Scientific Literature» by Zilberman L, published in Foreign Language Teaching, n°3, 1989, Bulgaria.
(2) Toncheva K., «Linguistic Study and Modern American Aviation Literature», compiled research papers written for a degree, 1991, Pleven Bulgaria.

Communication in the English Language Classroom

Elena H. Antova
Aviation English Instructor, Air Force Academy, Bulgaria

Many changes have occurred in our society lately. They have influenced the educational system as well. We recognise the benefits of the change and realise that a certain choice involves both responsibility and consequence. How have all these changes affected our work as teachers? We have been lucky to have the opportunity of revising our teaching materials and approaches. We have always been concerned with meeting the needs of our students - trainee pilots and ATC controllers. We have asked ourselves questions - general and specific, theoretical and practical - in order to provide a reasonable basis for the choice of syllabuses, adequate and updated materials, teaching and evaluating.

A few years ago, we did not have the possibility to choose between different textbooks. We used the only book available: «Английский язык летного и диспечерского состава».

We could not compare it with anything else. We were closed to the world not only because of the political system, but because of the fact that our Higher school is a military one. We had to follow certain strictly centralised standards. The general plans were designed in the Ministry and to a greater extent were the same for all the higher military schools. The teaching techniques were also predetermined and there was a permanent control by the task-giving authorities of the way the assignments were performed. We are completely aware there should be a certain uniformity that we have to achieve. But this should be the lowest step we offer to our students. A caring, self-respecting teacher should not be satisfied with the idea of the school being an instrument for fulfilling an 'outside' will only. Uniformity should go hand in hand with flexibility and creativity.

So we tried to look from another angle at the questions of WHY the students needed to learn,

how those WHO were involved in the process could benefit from it, what potentials and limitations brought the fact of WHERE and WHEN the learning was to take place, i.e. we had to analyse once again the needs of our students and their employers. We had to expand and update the language needed and the proper way of describing it. We had to set a realistic level of proficiency for our students and find out how to offer and achieve better ways of learning, i.e. what learning theories and methodology to employ. We know that the description of the language needed, the learning theories and the needs analysis work together and are interdependent. Now that we have opened our eyes wider to the world and the world is ready to help us compensate for our past and catch up with all the major achievements in different fields, we are still looking for the proper balance of these three factors. We hope we will manage to implement them successfully in our practice. At least we are trying to do our best. We hope also to work in cooperation with more experienced people and organizations, people with certain positive traditions in the field of aviation.

We do not want to be ungrateful or entirely reject the first aviation textbook we once used It served us 'honestly' for such a long time. But it meets neither the raised needs of the students, nor the new criteria of the teachers and employers any longer. We think there could be more than one single source from which a language course could get its linguistic input. That book has its advantages, but on the whole it is not sufficient for our work any longer (it does not follow the logical order of the flight, it is based on grammatical rather than on lexical principles, there are no recordings, not enough visual aids, the PCDs offered are rather old, there is little or no variety of non-routine situations, it allows no creativity, and the content needs revising and updating). Yet, for a variety of reasons it still has its place, limited as it is, in our aviation English course (especially for military pilots) as an initial step,

a starter. We agree that materials could be complementary and not mutually exclusive. The role of the teacher, in collaboration with specialists, is to make the proper choice from the existing sources and judge the fitness of these materials for our purposes. We have strived to find out what would most benefit the learning process, i.e. to select the necessary variety of factors building up a good appropriate syllabus. In fact the real problem is, as M. Swan said, how to integrate different syllabuses (e.g. functional, notional, structural, skills, etc.) into a good teaching programme. Because it is not just the content of what is learnt that is important but also the activity through which it is learnt (Prabhu, 1983).

We are grateful we can use other textbooks now: «Airspeak» by F. Robertson and «English for Pilots and Controllers» by Y. Rengade.
We can see and feel the difference when we compare them with the previous book. We are extremely thankful to our friends from Toulouse for giving us the opportunity to enjoy this set of books and cassettes. It is a pleasure not only for the teacher to teach, but for the learner to learn as well. The books contain interesting dialogues and texts following the logical sequences of the different stages of flight. They involve the learners in enjoyable activities which graduate from simple dialogues to complete flight simulations. Thus, students have the opportunity to use their existing knowledge and skills and develop their thinking capacities. We can find variations and explanations of phraseology. These together with the updated exchanges build up both the learners' and teacher's confidence and increase the reliability and validity of the materials. The books are useful and popular also because of the 'live' recordings that provide authentic practice. We can boldly state that the materials in these textbooks are highly evaluated because they match the learners' needs to a great extent. Besides the subjective factors do not exceed objectivity. The textbooks meet

our criteria for content and language areas. They presuppose and allow appropriate methodology, too. Yet, we do not want to look at them as at a fixed set of requirements and would like to keep in touch with the development of other ideas of what else could be needed and updated. We are trying to, constantly searching for any additional information and creative exercises based on the existing texts. We can summarise that the two textbooks meet Alan Waters and Tom Hutchinson's criteria for the subjective and objective analyses that we have accepted as valid and reliable. They take into consideration our AUDIENCE (pilots and controllers), our AIMS (gaining and maintaining confidence in the use of English-based RT, i.e. achieving high language competence, providing pilots and controllers with easy access to the language system in its most up-to-date form), the CONTENT (the language used in the textbooks is a combination of structural, notional, functional, discourse-based types covering all the stages of a flight in both routine and non-routine situations; there is an integration of skills covered in the materials - reading, listening, writing, speaking; there is a variety of text types - dialogues, incident reports, listening texts, charts; the subject matter, the high level of knowledge and the types of topics maintain the interest of the learners - they are straightforward, factual and take into account the human factors; the content throughout the course is organised by a combination of useful vocabulary and is sequenced from stage to stage, thus providing recycling). The content within the units is organised by a variety of patterns which allows the development of certain skills and is sequenced from comprehension to production by means of additional creative tasks set by the teacher and thus achieving not only accuracy but fluency. This «recycling» is of great importance as practice and helps to memorize standard RT exchanges). The METHODOLOGY is not easy to describe. It has to do with the best experiences in the classroom and is often based on a combination of different theories of

learning. The textbooks allow group, pair and individual work and presentations.
Students value the activity of listening to and recording dialogues and incident reports. They enjoy discussing real situations and analysing the reasons for accidents and incidents especially if they are caused by 'inadequate' language, i.e. lack of competence and understanding. These potentials of the materials increase their validity and reliability. A number of other learning-centered techniques can also be successfully applied to our lessons:

Gaps create a demand for reflection which is an integral part of learning. We can ask students to fill in different kinds of gaps: information, media, memory, jigsaw, etc.
Variety is an excellent way of keeping the learner's mind alert. We can achieve a variety of medium (tapes, pictures, texts), of classroom organisation (group, pair, individual work), of learner roles, of exercise, activity or task, of skills, of topics, of focus (fluency, accuracy, discourse).
Prediction is the ability to use existing knowledge to anticipate what is likely to happen next. This technique has great advantages: creates the learners' confidence in their competence and performance, enables the teacher to discover gaps in the students' knowledge and remedy them in time, activates the learners' minds and give stronger motivation for further work.
Enjoyment is essential. The desire to make the lesson more enjoyable and vivid is not a waste of time and effort. Boring lessons lead to nothing and can not achieve their objectives.
Preparation for the activities and INVOLVEMENT in them. Learners
experience and sense their contribution to the lesson and try to be better prepared and more personally involved. Teachers should take into account the types of characters of their students - passive/active, shy/open, and balance their participation throughout the lesson.

Creativity is important. We should encourage students to express their own opinion in the most fluent way. They like creating situations - especially non-routine ones because they enjoy the challenge of using new vocabulary and devising dramatic and sometimes even humorous situations.

Many positive aspects of the two textbooks have been pointed out so far. It may appear strange and funny that we praise books which have been in existence for some 6-7 years. Perhaps there are other valuable sources of learning as well. We will not argue and would be grateful if we could find an opportunity to explore other appropriate materials and share the experience of our colleagues in other countries.

It should also be emphasised that this conclusion has been drawn not only on behalf of the teacher. A short survey of what the students like and consider valuable in these books was carried out in the middle of a course. We needed that feedback just to make sure of where we were, what we were doing and how we were doing it. We were not disappointed with ourselves! We also wanted to know if our students had any other suggestions (drawn from their probation practice), for improving communication in the classroom. The gap filling, the analysis of the new RT phraseology with its possible and updated variants, the recording of their own voices paying attention to proper intonation and speed of speech were evaluated both as extremely useful and indisputably necessary. The students graded the authenticity of the dialogues in AIRSPEAK highly, especially the fact that the people recorded were of different nationalities. There is all the background noise characteristic of airports and cockpits (the lack of which is the only disadvantage of «English for Pilots and Controllers»). This, of course, makes the understanding more difficult, but as the students

stated, 'live' recordings are to be preferred. Another merit of «English for Pilots and Controllers» is the extended oral practice. The learners are extremely pleased to be praised for their good performance and feel satisfied with themselves. The students admitted they had a greater need for communication and suggested the extension of free conversations, discussions, even dictations and just reading. They are certain that a better command of general English will increase the confidence in their fluency and will help them deal more successfully and in a shorter time with non-routine situations.

This survey together with the nature of the classroom work has another positive effect: it strengthens the relationship between teachers and students. It proves that the learners are a real factor and the teacher should be ready to serve their needs.

In order to decide what is best for his students, the teacher himself should develop constantly and keep in touch with the new tendencies. Only in such a way can he respect himself and be of real help to his students.

We hope that the existing reality can give us the opportunity to regularly exchange information and views about the present state and the tendencies in Aviation English. We would like to congratulate the organizers for the realisation of the idea of the Newsletter. We are happy we can share information and experience. We would be pleased to attend seminars, workshops, conferences. Even just a guided visit to or a short stay at a training centre with traditions will be of great help to us. We would be available to attend short teacher training courses. It is important for us for the sake of the uniformity of requirements and regulations. The process of learning can be most effective if we as teachers know what

to demand and how to achieve it. Perhaps an agreement or at least a recommendation could be made, engaging the respective international authorities as to teacher training problems.

Conclusion

The survey of the teaching materials we use at the Higher Military School of Aviation in Bulgaria points out the advantages of «AIRSPEAK» by F. Robertson and «ENGLISH FOR PILOTS AND CONTROLLERS» by Y. Rengade. They meet learners' needs and provide valuable practice.

The students themselves evaluate these textbooks highly. Their opinion proves the validity and reliability of the texts and recordings.

The relationship between the teacher and the students is of great importance. A good teacher should take into account different psychological factors influencing the process of learning.

People working in the field of aviation should cooperate and unite their efforts for achieving professionalism and securing safety flights.

References

Hutchinson T. and Waters A.:English for Specific Purposes, CUP, 1987
Robertson F.: Airspeak, Prentice Hall, 1987
Rengade Y.: English For Pilots and Controllers, Editions Cépaduès, 1991

P.A.R.A.D.I.S.E.: Computer Assisted Language Learning Based on Your Favourite Texts
ir. lic. Johan Vandewalle

Concept and Operation of P.A.R.A.D.I.S.E.

Concept

P.A.R.A.D.I.S.E. is an open language program which allows the teacher or student to enter both authentic and proper texts, to call up explanations on the words of the texts from the databases and to generate exercises on grammar and vocabulary.

The student will be especially motivated to work on properly selected text materials related to his or her sphere of activity. Moreover, content can be perfectly tailored to meet the student's level and needs.

As a «tool» for both teacher and student, P.A.R.A.D.I.S.E. aims at reducing time consuming preparatory work necessary for the integration of authentic texts. Due to an efficient collaboration of man and machine, required results will be achieved more rapidly than by assigning tasks exclusively to either. P.A.R.A.D.I.S.E. assists both teacher and student, and is intended to support their method as much as possible, as opposed to imposing restrictions. With P.A.R.A.D.I.S.E., the user remains the master of the process, being able to intervene at any level, however powerful the computer.

As a result of working with this «tool», the teacher has more time to deal with the necessary communicative aspect of language teaching, such as the conduct of discussions relating to a certain text, for example. Also, the assistance of P.A.R.A.D.I.S.E. enables the independent «exploration» of authentic text material to be more easily attainable for foreign language learners.

How does P.A.R.A.D.I.S.E. operate?

• The text entered (without «codes») is subjected to a thorough linguistic analysis. The module for morphological analysis is able to recognize each declined or conjugated word form in the text (Dutch, French and English, to be followed later by German and Spanish), and to reduce it to its dictionary form. The program also determines the word class and the grammatical form e.g.:

Dutch geolied - oliën, werkwoord, zwak voltooid deelwoord
French admise - admettre, verbe, participe passé féminin singulier
English trafficking - traffic, verb, -ing form

In this way, words can be reduced to their basic form. In French, for example, more than half a million textwords can be reduced to 60,000 dictionary forms. All French texts, from the most elementary (e.g. beginner's lessons) to the most complicated (e.g. the dictation of «le championnat d'orthographe») can be dealt with by P.A.R.A.D.I.S.E..

Regarding ambiguous words, each possible interpretation is listed e.g.:

Dutch dorst - dorst/dorsen/dorsten/durven/dor
French plu - plaire/pleuvoir
English left - leave/left.

• This morphological analysis is the «motor» of the system, facilitating the double function of «text comprehension» and «generation of exercises». Information on each word of the text can be found immediately by consulting the databases situated on the hard disk. This is the basis of text comprehension.

As conjugated forms will not be found in the dictionary, the program first recognizes the

word «lurent» as in «Ils lurent un livre» as «passé simple» of the infinitive «lire», linking it with the necesary information in order to find the definitions, translations and example sentences.

Relying on this linguistic analysis, P.A.R.A.D.I.S.E. is able to identify those elements in any text which are considered suitable for dedicated exercises on grammar and vocabulary. For example, if a system is able to recognize «passé simple», we can ask this system to replace all forms of the «passé simple» occurring in a given text with their respective infinitives. Tracing the original forms, the student will then have to conjugate the verbs.

P.A.R.A.D.I.S.E. exercises are solved on the computer screen, or may be copied on an autonomous functioning floppy disk, or printed on paper.

P.A.R.A.D.I.S.E., a universal concept

Basic version

Each user can use the universal P.A.R.A.D.I.S.E. concept to enter his or her favorite texts and databases such as example sentences, definitions, translations, etc., of words appearing in the texts. The program will automatically link up these elements.

Specific P.A.R.A.D.I.S.E. versions

In addition, specific material can be provided with the program such as ready to use texts on floppy disk - (e.g. a course on banking topics, literature, communicative dialogues etc.) and specific databases for text comprehension - (e.g. a banking dictionary, an English/Spanish dictionary, example sentences suitable for migrant children, a database on pronunciation, a database with images, etc).

Depending on the nature of the material provided, a «specific» P.A.R.A.D.I.S.E. version can be developed. This is the way «P.A.R.A.D.I.S.E. Banking» has been realized - a P.A.R.A.D.I.S.E. version which besides being a complete course containing up to 240 texts on banking topics, in Dutch and French, contains a complete dictionary, this being the official terminology lists (Dutch/French, French/Dutch) of the Belgian Banker's Association.
In addition, existing manuals containing texts, exercises and vocabulary lists can be integrated into P.A.R.A.D.I.S.E..

Text comprehension - the first function of P.A.R.A.D.I.S.E.

Problem definition

In real life, it is utopian to expect students to read articles or literature in a foreign language on their own with the aid of only a dictionary. A major obstacle is the sheer time taken in searching for information. With P.A.R.A.D.I.S.E. it is possible to trace a word in three or four dictionaries or vocabulary lists with the minimum of time and trouble. This opens up new perspectives for the exploration of texts on an autonomous base.

Different steps of text comprehension

The learner traces the meaning of an unknown word in a number of steps:
Step 1: P.A.R.A.D.I.S.E. always reduces the word form in the text, whether regular or irregular, to its possible dictionary form(s), which during the analysis has(have) been linked up to the text words as a «label».

Step 2: The learner moves immediately from the label to the word databases and calls up other contexts of the unknown word. The word from the text is illustrated in other sentences. Given these examples, the learner makes the first hypothesis about the meaning of the word.
Step 3: The learner calls up a definition in the target language in order to test the hypothesis. As paraphrases also contain related words, the new word is immediately semantically inserted into the vocabulary already studied.
Step 4: Finally, the learner calls up a translation of the word and checks if he or she has «guessed» the meaning during the first two steps.
In this process, certain steps may be abandoned (e.g. the translation, in order to work monolingually). On the other hand, other steps will be added in the future, such as video images and pronunciation of words.

System databases and user databases

Information relating to the words in the texts can be called up from two different types of databases: «system databases» and «user databases».
«System databases» are complete databases which can be supplied with the program and are often directed at a public interested in a specific target - e.g. university students who will use a different dictionary from primary school pupils. Sample sentences used in «Dutch for migrant children» will not be the same as those used in «Dutch for bank employees».
«User databases» offer the user (teacher or student) a structure which can be completed: example sentences, expressions, definitions, translations... The information entered is utilized at most. A word has to be explained only once in order to make the explanation available from any text or in any grammatical form.
This makes for an efficient management of the personal vocabulary list, e. g. the cards made

on the form «eat», are automatically traced back by P.A.R.A.D.I.S.E. from «ate», «eating», «eaten», «eats», etc.

All user cards appearing on the screen, are immediately adjustable. This means that the user does not need to leave the text, so that proper definitions, translations, etc. can be matched with the use of those words given in the text and thus be immediately «perfected».

Text disk

By putting a text together with its example sentences, definitions, translations, etc. onto a floppy disk, a «text disk» is created, with which the «annotated text», independent of the mother sytem, can be studied on any MS-DOS computer.

Generation of exercises - the second function of P.A.R.A.D.I.S.E.

Exercises on texts

Reading the text and consulting databases account for only part of the learning process. P.A.R.A.D.I.S.E. offers the teacher (and also the advanced student) the possibility of generating a wide range of exercises based on the text and directed towards a particular goal. These exercises are integrated as «assimilation exercises» after the traditional treatment of the text in class, to prepare a specific lesson - e.g. a debate on a particular topic or independently of a text, to practise certain skills or grammatical rules.

The exercises prepared by the teacher using P.A.R.A.D.I.S.E. can be either printed on paper or solved on the screen. By copying the exercises onto a floppy disk, an «exercise disk» can

be created which can be used on any MS-DOS system, completely independent of the mother system, and without hard disk.
Thus, the student having the use of such a disk, can decide when and where he or she wants to solve the exercises.
In due course, the teacher using P.A.R.A.D.I.S.E. will have at his or her disposal a wide range of ready made exercise disks on favourite texts. The required disks need only be taken out from the shelf, the necessary quantity copied and distributed to the students who can then perform the tasks in the computer class or even at home.

Method for the generation of exercises

Relying on the automatic lexical analysis and on the requirements of the teacher, the program locates all words in the text which meet certain selection criteria (e.g. all adjectives, all past tenses, etc.), thus providing all the words needed for a dedicated exercise. The selection can, if necessary, be adapted manually by the teacher - words being added or deleted. Words of special interest may also be selected manually by the teacher. The text is then transformed into an exercise by having the selected words disappeared partially or completely. The student is then asked to trace the erased words. The dictionary form of the word can appear in brackets as a clue. This is how exercises on declension or conjugation of all word classes are generated.

With the enormous quantity of selection criteria, and their possibilities of different combinations, the number of types of exercise is almost unlimited. Creative teachers can even produce their own types of exercise.

Here below, the most important methods of selection are explained, together with some examples.

Methods for selecting exercises

• Grammatical selections

- P.A.R.A.D.I.S.E. is able to locate all word classes throughout the text. The user can limit the selection to the required tenses or forms.

- P.A.R.A.D.I.S.E. is able to trace all inflected forms of any word or series of words in a given text.

Some examples:

- all plural Dutch nouns
- all French verbs in -dre occurring in the text as participe passé
- all English adjectives in the «comparative» or «superlative»
- all Dutch verb forms in the text ending in «d», «t», or «dt»
- all conjugated forms of the French «être» or «avoir» : suis, est, sois, furent, seraient, fusses, été... a, avons, ayons, eût...

• Vocabulary selections

When introducing an authentic text, the teacher may ask himself «Which words are my students likely to know? Which words have they learned already in my course? Which words, therefore are «new» to them? Which of these new words should be learned according to the programmed course? Which words are worth remembering?».

P.A.R.A.D.I.S.E. will answer these questions, relying on basic vocabulary, history lists and target lists. In this way, exercises can be generated on:

- the «new» words
- specialised vocabulary
- words belonging to a target list.

Clients may supply us with a target vocabulary list (based on frequency data, contrastive analyses, manuals, technical terminology, etc.) which then can be imported in the concept.

• Further selections

Selections can also be generated according to mathematical principles, such as the selection of all n-th words which produces Cloze-exercises.

Finally, P.A.R.A.D.I.S.E. can be used as an authoring system to enter both open and multiple-choice questions, together with possible answers in order to work on the content of the text.

Didactic support on the learning process

When the students have entered an answer on the screen, P.A.R.A.D.I.S.E. immediately indicates whether or not the answer is correct. In that way they are prevented from repeating the same mistakes and acquiring the wrong «mechanisms». If they do not find the right answer in the allotted number of trials, then P.A.R.A.D.I.S.E. gives it.

The teacher may also enter alternative answers. Feedback messages linked to the correct or incorrect answers tell the student more about the kind of mistake made.

A variable clock limits the time the student has to perform the exercise.

Development

P.A.R.A.D.I.S.E. has been developed by the NV. De Wilde-Buyck, Ottergemsesteenweg 439,9000 Gent.
Ir.lic. Johan Vandewalle is responsible for the product definition and linguistic routines.
The program is currently operational in Dutch, French and English. German and Spanish versions will be available in the future.

VISITING PARIS

Paris, Fifty Years 0n...
William Niggli
Swissair Language Service

Paris, at any time of year, is enchanting to lovers, tourists and simple individuals who would classify themselves as inquisitive passersby. It was at such a time, when I felt myself privileged to feel a combination of all three, that I found that which I had been looking for originally after having done the usual. Paying a visit to the 'Notre Dame' had left dark, stark, musty thoughts of how awesome the fear of God must have been in the minds of men during the period it was built; so little light was allowed to shaft its way in to penetrate the loneliness of doubt. After emerging from the portals of symbology, my original quest remained elusive, except for the usual sign post that somehow pointed into the Seine. But I soon found its whereabouts after I had consumed a café noir, paid, and got the directions supplied after a tip. Yet, it still remained veiled. Maybe that was the intention of Corbusier's student, that it should stay half hidden to the eye, known to the subconscious.

The memorial to the 'Juifs' that were deported from France lies in the heart of Paris, could one say France; Paris being the administrative heart of the 'Empire'. One walks across flat earth suddenly to descend a short flight of steps into what opens out into a roofless abstract quadrangle. Walls surround you, driving you back, but there is no back for you have arrived, you are trapped. Ahead, a point clefts the Seine in two, an opening at eye level allows the fears in one's inner self to be calmed, the tears of countless generations flow past, you can't stem the tide, you can't reach out and feel, you only long to join them on their journey onwards and away; but you can't. All knowledge of where you have just come from is obliterated. The walls are that little bit too high, just that little bit too real to believe, they have taken over, so one turns to flee, but the entrance has blended into the walls. Then there, yes, a crack appears; escape! Refuge? Hope? An attempt must be worthwhile; the walls are beginning to close in, to compress.

The opening for escape has decreased with each passing event whose shadow one has failed to read for countless years. You move automatically towards that aperture, birth, escape. It is narrow, unyielding. Claustrophobic fears have no place here. After a few eternal grey yards, and with an almost sideways walk to get through, one bursts into a completely domed cavern. There is no escape. Was it all a deceptive belief? Ahead a corridor girdled by rows upon rows of guiding lights illuminating your way to what seems to be a mound, or is it an altar? No, a dolmen; a grave? The lights tunnel your vision. Each light is a life. For technical reasons, they represent a Jewish life that was taken from French soil and snuffed of German air. They sear the shame of man against man with white heat, deep into the darkness of unjudging infinity; Jew is a name given to a man by man. The walls close in and slowly clasp you in a vice that forces protest to call out; but there's no one there except from where you came. There at the end of the very crack through which you entered, in the distance, are the rippling wavelets of the Seine licking tantalisingly against your walls. Passing voices murmuring the hope of mingled tears that say «join us, join us we are on our way to a new land». And then, at the end of these moments of freshly engraved feelings, comes the realisation that hope is the only motive for existence. We, the product of past hope, can only survive if we continue to exist hand in hand with hope. If not, then those lights and all the lights of man will one day burn so brightly that life itself will be blinded out of its very own existence.

THEMES FOR FORTHCOMING EVENTS

A number of participants felt we had not exhausted the themes of the Fifth Forum and so we could come back to People, Flying Machines and English for future events (at either forums or seminars) and that the speakers could update some of the topics dealt with. One of the questionnaires insists that the effect of automation on the ability of pilots/controllers to maintain a competent level of English would be worth examining quite thoroughly. The teaching of RT as well as refresher courses for ATCOs and the standardization of teacher training in this area have been suggested by several people. Safety, automation, abbreviations, the language changes that will come as a result of new technologies have been suggested. Preparing ATCOs in innovative ways to deal with non-routine situations or as another participant put it: a discussion on the language of non-standard situations but not in the area of phraseology. Once an exit test is in operation, could we not have a feedback seminar? Simulation familiarisation sessions have been requested, more on cultural awareness, translation and writing of documents by non-native speakers, and (why not) a managerial focus on managers' needs to be multilingual in a global market. These are the concerns mentioned in the Fifth Aviation English Forum questionnaires. On an organizational level less choices, more plenary with more time for general discussion and, if need be, shorter presentations were suggested. Thank you for all of these suggestions that we are sure will make all the readers look forward to future events.

ABBREVIATIONS

ACAS	Airborne Collision Avoidance Systems
ACC	Area Control Centre
AEA	Aeronautical Engineers Association
AECMA	Association Européenne des Constructeurs de Matériel Aérospatial (European Association of Aerospace Equipment Manufacturers)
A/G	Air to Ground Radio
AIM	Aircrew Integrated Management
AMA	Area Minimum Altitude
ATC	Air Traffic Control
ATCO	Air Traffic Control Officer
ATPL	Airline Transport Pilot's Licence
ATS	Air Traffic Services
CAA	Civil Aviation Authority
CALL	Computer Assisted Language Learning
CENA	Centre de Navigation Aérienne (Air Navigation Centre)
CFIT	Controlled Flight Into Terrain
CHIRP	Confidential Human Factors Incident Reporting Programme
CLA	Centre de Linguistique Appliquée
CPL	Commerical Pilot's Licence
CRM	Cockpit Resource Management
C/S	Call Sign
DA	Decision Altitude
DGAC	Direction Générale de l'Aviation Civile (French Central Civil Aviation Authority)
DRAC	Direction Régionale de l'Aviation Civile (French Regional Civil Aviation Department)
EAO	Enseignement Assisté par Ordinateur (Computer Assisted Teaching)
EATCHIP	European ATC Harmonisation and Integration Programme
EBAA	European Business Aviation Association
ECAC	European Civil Aviation Conference
EFL	English as a Foreign Language
EGATS	Eurocontrol Guild of Air Traffic Services
ELT	English Language Teaching

ENAC	Ecole Nationale de l'Aviation Civile (National Civil Aviation College)
ERA	European Regional Airlines (association)
ESP	English for Specific Purposes
ETD	Estimated Time of Departure
FAA	Federal Aviation Administration
FAI	Fédération d'Aéronautique Internationale
FL	Flight Level
FMS	Flight Management System
FTO	Flight Training Organisations
IACTFLAP	International Airlines' Council on the Teaching of Foreign Languages to Airline Personnel
IAL	International Air Traffic League
IAOPA	International Council of Aircraft Owner and Pilots Association
IATA	International Air Transport Association
IATEFL	International Association of Teachers of English as a Foreign Language
ICAO	International Civil Aviation Organization
IFALPA	International Federation of Airline Pilots Association
IFATCA	International Federation of Air Traffic Controllers
IFR	Instrument Flight Rules
IR	Instrument Rating
JAA	Joint Aviation Authorities
JAR	Joint Airworthiness Requirements
MDA(H)	Minimum Descent Altitude (Height)
MEA	Minimum En route Altitude
MOCA	Minimum Obstruction Clearance Altitude
MOR	Mandatory Occurrence Reporting
MORA	Minimum Off Route Altitude
MSA	Minimum Safe Altitude
NOTAM	Notice to Airmen (Gives information on establishment, condition or change in any aeronautical facility, procedure or hazard: *ICAO*).
O/A	On or About
O/T	Other Time

OCA	Obstacle Clearance Altitude
PPL	Private Pilot's Licence
PST	Project Supervision Team
QFE	*Code* «To what should I set altimeter to obtain height above your location ?» (Usually requests airfield pressure)
QNH	*Code* «To what should I set my altimeter to read your airfield height on» (Gives arrival height on safe terrain clearance)
QRI	Qualification de la Radiotéléphonie Internationale (French International Radiotelephony Qualification)
RA	Receiver Attenuation
RT	Radiotelephony
RTF	Radiotelephony
SDAU	Safety Data Analysis Unit
SE	Simplified English
SFACT	Service de la Formation Aéronautique et du Contrôle Technique (Aeronautic Training and Technical Testing Service)
T/O	Take Off
TCAS	Traffic Alert and Collision Avoidance Systems
TEFL	Teaching English as a Foreign Language
TESOL	Teachers of English to Speakers of Other Languages
TOEFL	Test Of English as a Foreign Language
TOEIC	Test Of English for International Communication
U/S	Unserviceable
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Met Conditions
VOR	VHF omnidirectional radio range (most common of radio navaids)

CLA
Aviation English
Department
Paris Orly

Contact:
Marie Ange Glauser
Tel: (33) 81 66 52 63

Responsables
pédagogiques:
Joan Bellec
Ann Dufaux
Fiona Robertson
Geraldine Vine
Tel: (33 1) 46 75 10 14

A team of four permanent teachers has researched and analysed the language used by personnel working in the field of aviation. This team has been teaching and developing English Language training courses since 1979 for the French Airline AIR INTER.

In 1993 AIR FRANCE integrated the Paris based CLA Aviation team as well as their colleagues from the English Department in Besançon, in their training program for VIETNAM AIRLINES pilots.

At the end of 1994, ADP requested their collaboration for the needs analyses of Technical and Commercial Ground Staff at Paris Airports.

The courses cater to the specific needs of:

Flight Crew **Cabin Staff** **Management Staff**
Ground Personnel and **Airport Employees**

- **Specialized Training courses** include:

Airline Pilot Course in English	:	60 hours
Passenger Service Course	:	30 hours
Public Address Training	:	12 hours
Airline Instructors Course	:	30 hours
Radiotelephony Training in English	:	24 hours

- **Self Access Materials** include:
  Live radiotelephony communications recorded in flight
  Aviation Listening Practice booklets:
  Approach - Incidents in Flight - Security and Safety on Board
  Cabin English : a glossary and workbook of basic aeronautic terms.