

A Case Study – Training Aviation English to on-the-job Brazilian Pilots

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Summary

This paper aims to share the experience of an Aviation English Program tailored to attend pilots' needs and developed according to the recommendations described in ICAO Doc 9835. Strategies created according to pilots' routines as well as learning objectives achieved will be described. Methodology and techniques to improve all six elements in ICAO rating scale will also be shown. Finally, figures will be analyzed in order to verify how efficient this system has proven to be, assisting pilots in achieving ICAO level 4 by March 2008.

Scenario

Aviation market booms, tight schedules and staff availability are some of the reasons why major airlines have delivered to their pilots the responsibility of becoming English proficient according to ICAO rating scale. On top of that, any successful language training needs at least a weekly commitment from the learner, as opposed to technical training which is held annually. The amount of hours needed for language training far surpasses the number of hours needed for the whole technical training, which makes it difficult for airlines to adopt any language training in a short-term period.

For more than a year, an informal survey on airline pilots' feelings and expectations about their language learning was done for benchmarking purposes. Pilots who were keen to talk about it answered to questions such as what kind of language training they were having, how long they have had it, how they were feeling about their improvements and what kind of language training they were seeking for. The most important information gathered was as follows: most of them have already taken English classes, either in Brazil or abroad, while a minority has learned on their own, by reading books and watching videos or living abroad. Concerning further training, almost all of them were interested in improving or maintaining their proficiency. However, they often mentioned they were demotivated by general English materials, saying they were tired of studying the same general subjects. Also, they complained the fact they were in a specific field – aviation – was not understood by the teacher or school, as they had no familiarity with crew members' routine. We also detected complaints regarding their inability to attend regular classes on a 2-day weekly basis. Interestingly, some of them said they couldn't build bonds with the teacher, because they had no aviation knowledge and were not interested in learning about it.

After gathering and studying these information, a thorough Aviation English Program was tailored to attend pilots' needs, considering the nuances of Brazilian pilots actual routine and expectations, and developed according to the recommendations described in the Manual on the Implementation of ICAO Language Proficiency Requirements (Doc 9835).

Aviation English Program

On average, Brazilian pilots work on a 3- to 6-day schedule, usually out of station, followed by a 1- to 3-day-off for rest. Also, they often start their duties late in the afternoon or finish it before lunch time. Therefore, the curriculum is distributed in a 3-hour class per week, repeated from Monday through Saturday, in the mornings and afternoons, allowing students to choose which day and period to come to class according to their schedule availability. Students are allocated in a group class of up to 10 students,

within one of three different modules according to their current proficiency level attested by a placement test taken at the language center.

Each 3-hour class is divided into two periods of 1h30, with a 15-minute break, to allow students some rest to reestablish their concentration. Tasks are prepared to last up to 20 minutes each, following recommendations of psycho pedagogues that will be described later in this paper. Classroom activities are focused on speaking and listening skills aiming to improve all six elements described in ICAO rating scale, while reading and writing activities are used as aids to support listening and speaking, all of which complying with Doc 9835, chapter 8.3.1. They are advised to study the material at least one more time during the week. Therefore, a 2-hour homework is assigned every week to offer students opportunities to review the subjects learned before coming for the next class.

The choice for group classes

The vast majority of pilots who answered the questions stated that, by the time the research was conducted, they had only had private English classes, on a one-to-one teacher/student basis. They stated that what attracted them to a new English course was the fact that they would have the opportunity to share their experiences with a group of people that were on the same field. In other words, the “language learning classroom has become a more interesting, lively and engaging place to be” (Doc 9835, 4.2.4.). It has promoted a more comfortable class environment and stimulated more spontaneous exchange of information among them, thus generating more student-to-student talking time and enhancing the development of group dynamics. By doing so, classes are “...more student-centred, (where) interactive classroom approaches (are) designed to increase learners’ communicative competence in the language”. (Doc 9835, subchapter 4.2.4).

At the end of the first 125-hour module, students have stated their contentment with studying in a group, as through cooperative talking they can be prepared for the real life communication outside the classroom. Besides that, group classes increase opportunities for the unpredictability of real communication, for example, through role-plays, discussions and simulations, as well as increasing “opportunities for students to hypothesize and support their opinions” (Doc 9835, 8.1.5.). Pair work and small groups activities are delivered to help students develop skills to “improve comprehension under adverse conditions (such as excessive background noise)”, and “practice speaking while collaterally tasked” (Doc 9835, 8.1.5.).

Group classes, however, will only be effective if teachers take into consideration students’ individual differences, such as learning styles and strategies used to attain new information. Teachers shall be aware of these learning styles and strategies, thus for the same learning objective, various tasks covering different styles shall be prepared in order to enable all students to learn.

Psychological Tests

A group of psychologists who are aviation specialists was called to deliver tests so that some of the learning strategies used by the students could be identified. International and well-known tests were used plus one test especially developed for the students in aviation. The aspects tested were: short-term x long-term memory; visual, auditory and kinesthetic sensorial style; focused attention x divided attention; and concentration capacity. By analyzing the first results, we were able to identify how the student learns better and to prepare different tasks in order to enhance students’ learning process. As mentioned in Doc 9835, (8.1.3.), “providing multiple learning options and environments will also play into preferred learner styles”.

On top of that, the psychologists provided students with feedback making them aware of their learning styles and strategies, besides suggesting techniques about how to improve the less used senses by exploring their home environment. Not surprisingly, they became even more motivated and their self-confidence was boosted during the course, as they also used these techniques in their everyday routine, improving their lives as a whole.

Teachers became aware of students' needs and prepared activities according to the results obtained. Herebelow some of them are described.

Learning styles related to senses

They are sensory modalities used for learning information, divided in three categories: visual, auditory and kinesthetic. Ideally, all three senses should be balanced in order to optimize the learning process. However, tests showed that one of the three senses are usually more developed.

Visual learners are visually oriented, who visualize images during the learning process and judge by what they see. Information is easily kept if charts, graphs and symbols are used to convey meanings that could have been presented in words. These students expose themselves in class and are advised to say what they see.

Auditory learners use words and sounds for learning. They hear the message, but they need a long time to elaborate it. They are more passive in class to concentrate and keep the message. They learn better from lectures, audio files and reading aloud. These students are advised to study by speaking in front of the mirror, repeating the information several times and speaking aloud.

Kinesthetic learners use experience and practice to learn, either simulated or real situations. They need to feel and do things in order to learn, connecting things to reality. These students learn better when relating the information to their concrete personal experiences.

Short-term memory x Long-term memory

Short-term memory is used to recognize or understand instant information to be operated immediately and then it is forgotten if the student no longer needs to know it. Information stored in short-term memory can be easily forgotten as soon as something new is learned or after a very short period of time. As examples, short-term memory is used when students are trying to understand teacher's commands or answer a question.

Long-term memory is where all memories and facts are stored. Information becomes part of long-term memory through rehearsal and meaning, for example. In teaching words, by repeating and practicing a piece of information, (rehearsal); or by bringing emotional or survival meaning from the information, turning it into something outstanding or unusual (meaning), it will likely enter the long-term memory.

Test results showed that many students have weak long-term memory. Therefore it is vital that teachers always revise important lessons after some classes to reinforce and help students keep the information. Five to ten minutes at the beginning of each class are enough to review a subject, thus offering more opportunities for students to store the information in the long-term memory.

Concentration Ability

Concentration ability refers to how long the learners can direct their thinking to one or more stimuli. The tests have showed that students can concentrate in a task for up to twenty minutes. Tests also have shown that students are more concentrated when they are committed to and enthusiastic about the task. For these reasons, activities were planned to last no longer than twenty minutes; warm up activities were prepared to develop students' interest; goals were set to help students focus; activities were varied throughout the class; a time limit was set for each activity. Besides, students are advised to perform extra-class activities in order to develop concentration skills and strategies.

Classroom Techniques

All six elements of ICAO rating scale (pronunciation, structure, vocabulary, fluency, comprehension, interactions) are somehow interrelated and tasks designed to practice one of these elements must have a clear learning objective. Several well-known classroom techniques are being used by our teachers to develop and improve students' skills. Although the Communicative Approach is the methodology adopted at the learning center, as recommended by ICAO doc 9835 (4.2.4): "classroom activities focus on providing learners with opportunities to interact with the language in order to engage all of the elements that constitute language use... (and) grammar teaching in communicative classrooms is done in a meaningful context", a combination of other methodologies and techniques are used at certain times to increase students' learning opportunities. Some of them are described below.

Developing Structure

Grammatical structure can be compared to the bones of the body. It gives support to effective communication, enabling people to organize language. According to ICAO rating scale, "relevant grammatical structures and sentences patterns are determined by language functions appropriate to the task". Students are exposed to communicative activities where "grammar teaching ... is done in a meaningful context" (doc 9835, 4.2.4.).

Grammar and language functions are taught following six steps described below that were adapted from Penny Ur:

1. **warm up** – to contextualize the subject and arise students' interest. This way, students are more concentrated in the task to come;
2. **presentation** – grammar is presented in inductive or deductive way, depending on the task, usually a text for students to perceive the structure and take it into short-term memory;
3. **isolation and explanation** – the teacher isolates the structure and explains it enabling students to understand various aspects of the structure, when necessary. Sometimes, these structures are similar to their native language and easier to understand.
4. **focused practice** – although many linguistics don't like the use of oral drills, we believe that students can learn with oral drills which challenge them. In oral drills, students are not supported by visual aids, like a written exercise. Therefore, they have to internalize the structure in order to answer the drill correctly. According to Abbot, "students need the chance to conquer formal difficulties and then the opportunity to exploit semantic possibilities".
5. **communicative practice** – tasks are open and provide students with an opportunity to expand their knowledge and use the language freely. These tasks enable students to master the structure thoroughly.
6. **testing** – a tool to provide feedback on students' improvement, that can be formal or informal. It is usually used unconsciously throughout the course as teachers observe students' performance in class and homework assignments.

Steps 4 and 5 are considered the most important ones, as it is at this moment that students absorb the structure, transferring it from short-term to long-term memory. Therefore, careful attention must be paid to prepare these activities and observe students' development throughout the task.

Developing fluency and interactions

Fluency can be defined as how well one can convey messages. People learn how to speak through practicing speaking, therefore at least two people are needed to develop this skill. This way, interactions is directly linked to fluency, as in the communication process, one always intends to convey message to someone. In classroom, fluency and interactions can be practiced through several techniques, offering students opportunities to improve their skills as described in Doc 9835, such as being able to “manage the speaker/listener relationship” and “initiate and maintain exchanges”.

The most common techniques include role-plays, simulations and discussions. Teachers prepare tasks in which several language patterns and functions are presented, allowing students to choose among an array of patterns to use, just as in real life. Activities whose language objectives concern fluency shall offer opportunities to improve students' naturalness of speech production. At this moment, teachers should not focus on accuracy, but on fluency. Therefore, students' errors and mistakes should be noted down by the teacher to be discussed with the whole class after the completion of the activity.

For example, teachers introduce the activity (role-play, simulation or discussion), and stick on the wall prepared cardboards with functions and exponents that shall be practiced.

STALLING FOR TIME

Well, let me see...

let's see ...

let me think ...

now ...

how shall I put this ...

how can I phrase this ...

Asking For Clarification

Could you explain what you mean by this?

I'm not quite with you.

What do you mean?

I don't really understand what you are getting at.

I'm not sure I follow you.

Students perform the activity and use the exponents whenever the need for them arises. Teachers can use these techniques to develop students fluency and, for example, use discourse markers and connectors and become “skilled at checking, seeking confirmation or clarifying a situation”, as described in the ICAO rating scale.

Developing Comprehension

According to ICAO Manual of LPR, the pilot/controller shall “be able to comprehend a range of speech varieties (dialect/accent) or registers”, and comprehension should be “mostly accurate ... when accent or variety used is sufficiently intelligible...”. One of the main concerns of students is the ability to understand accents and regional variations in English spoken as a second language. Brazilian pilots, in particular, are not accustomed to listening to Arabic English, Russian English or Chinese English, for example. As Brazil is surrounded by Spanish speaking countries, Spanish English is easier to understand, as accommodation has already taken place.

Comprehension skills can be developed by exposing students to a team of teachers whose English background varies. Moreover, group classrooms allow students to increase opportunities “for the unpredictability of real communication, linguistic or situational complications” and to be “confronted with a linguistic or situational complication or an unexpected turn of events”. Finally, teachers can build listening activities from real-life aviation articles recording other English teachers’ voice, international friends and text-to-speech tools available on the web. Listening activities should be used as great opportunities to check comprehension and support speaking. Speaking can take place if the listening activity is prepared so that it includes four steps: warm up, presentation, task and follow up.

Program Outcomes

After completing 125 hours of studies, students took an extensive test, both written and oral. Even though ICAO requirements focus on listening and comprehension skills, in our language center all four skills were assessed. Examiners analyzed all six elements of ICAO holistic descriptors and results were supported by the ICAO rating scale.

Students who were low level 3 achieved the results as follows:

- 23% achieved high scores between 90 – 100 (flat level 4);
- 58% achieved average scores between 75 – 89 (low level 4);
- 8% achieved minimum scores between 60 – 74 (high level 3);
- 3% were unable to achieve minimum requirements to move on to next level;
- 6% were absent in more than 25% of classes and were advised to revise the material;
- 2% quit for external reasons.

The results show how effective the program is: 81% of the students who were low level 3 have progressed to level 4. Many of them told they were complimented on their English performance by their flight instructors enroute. 6% of the students who were unable to attend more than 75% of classes stated that their tight flight schedule combined to their hometown being in another city were the relevant issues for not attending the classes. 8% of the students had difficulties in mastering some of the linguistic domains, however, skills have improved significantly. They were advised to take some private classes to master these subjects. Even though on-going assessment takes place throughout the course, 3% were unable to master all the linguistic domains and were advised to take extra classes to review and reinforce weak points.

Finally, there is still a lot to be done in order to help those 15% who couldn’t achieve the results desired. More research and study is taking place to find ways of assisting these students who are professional pilots and see the March 5th 2008 deadline becoming closer.

References

- ABBOT, G., Encouraging communication in English: a paradox, *English Language Teaching Journal*, 35.
- GOTEBIOWSKA, A., Getting students to talk. Prentice Hall, UK, 1990.
- UR, P. Grammar Practice Activities – A practical guide for teachers, Cambridge University Press, UK, 1988.
- ICAO. Manual on the Implementation of ICAO Language Proficiency Requirements, 2004.
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