

A SURVIVAL COURSE IN AERONAUTICAL REPORT WRITING FOR FRENCH-CANADIAN AIRCRAFT MAINTENANCE TECHNICIANS

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The "École nationale d'aérotechnique" is a college-level institution which specializes in training students in aeronautical technology. The three major areas of study are: aircraft maintenance, manufacturing technology, and avionics. Not only is it unique in offering such a complete range of courses, but it also has the added distinction of giving them entirely in French.

The problem

English is generally accepted as the international language used in aeronautical reports and forms to ensure a standard means of communication. Therefore, aircraft mechanics whose first language is not English all have to deal with a common problem when it comes to filling out the paperwork associated with their job: survival skills in specialized English.

The solution

In order to better prepare the French-Canadian students for their future jobs, it was necessary to provide them with a service course designed to teach them to use English as a tool of the trade. These students, whose ability to communicate in English ranges from bilingual to beginners, must all learn to apply the same precision to the basics of report writing that they use when inspecting an aircraft. Since emphasis had to be placed on the English language, the Department of Languages was given the responsibility of developing and teaching the course.

Designing the course

1) Industrial survey

To create a course which would best meet the students' needs in the short framework of 45 class hours, we decided to go out into the field to discuss the problems of report writing with mechanics on the job. Using a questionnaire as a guide, we interviewed representatives from the following companies: Air Canada, Canadair, Nordair, Québecair, Montreal Flying Club, and Hélicraft. We tried to get as wide a sampling as possible of different working situations by visiting both large and small companies.

The results of this industrial survey brought us to the following conclusions. In general, language skills for mechanics employed by large companies are limited to understanding the terminology used in inspection lists or job cards, which are merely checked off or initialed as the inspections are accomplished. Any defect found during the inspection has to be entered on the appropriate form or ticket using a "telegraphic" style. Employees of smaller companies are required to read more complex documents (maintenance manuals, service bulletins), fill out longer defect ("snag") reports or work reports (descriptions of work done), and might even have to make a field report if sent on a job assignment outside the company.

We drew up a content list based on our findings:

- a) Terminology necessary to describe defects and repairs, as well as to understand documents related to maintenance;
 - b) Minimal grammatical elements required to fill out forms;
 - c) A sampling of documents as a corpus for developing reading comprehension;
 - d) The various forms associated with aircraft maintenance.
- 2) Documentary research

To complete this outline, we analyzed inspection lists, maintenance manuals and service bulletins, as well as sample reports furnished by the companies.

- a) Terminology was divided into the following main categories:
 - Inspection terminology necessary to describe defects;
 - Words and expressions used to pinpoint the location of damage;
 - Terms used to describe repairs or preventive maintenance;
 - A general overview of the nomenclature of aircraft structures and systems.

All English terminology is presented with its French equivalent. Therefore, the students can use the technical terminology learned during this course in reports required in French for other classes. Translation is also an aid to teaching vocabulary which is difficult to visualize and for which pictures are often unavailable.

Precision is of utmost importance especially in regard to inspection terminology which is both descriptive and diagnostic at the same time. Saying that a cable is "chafed" or "frayed" tells much more than simply stating it is "worn."

- b) Grammatical elements were kept to a strict minimum ("survival" level) and were chosen in terms of their communicative properties rather than their level of "difficulty" as they traditionally appear in an orderly progression of graded materials. The following elements were considered the most important syntactical components:
- Simple past tense and passive voice (used in describing defects or work done).
 - Imperative (used in inspection lists).
 - Modals: "should"; "has to/must"; "can"; "may/could/might"; "will" (indicating degree of probability or obligation).
 - The student has to recognize the difference between something which "might" cause a problem and something that "will" cause a problem; something that "should" be checked and something that "must" be checked.
 - Adjectives used in spatial description: e.g. the "forward" fuselage section, the "aft" fuselage section;
 - Complex prepositions used as adverbials: e.g. "forward of" the main spar, "inboard of" the outboard aileron.
 - Adverbs of degree and frequency.
- c) Excerpts from maintenance manuals, inspection lists, service bulletins, and airworthiness directives (regulatory documents issued by Transport Canada and the FAA) were selected for reading assignments and accompanied by comprehension questions.

No attempt was made to create "graded" versions of the reading material since we knew that, in many cases, students would be plunged headfirst into reading this type of text on the job. Instead, we controlled the length of passages selected and focused on key expressions or phraseology which is of a stereotyped nature in maintenance documents.

- d) Various forms associated with aircraft maintenance were used as support for written exercises to familiarize students with their format and lend greater credibility to the simulated report writing situations.

Conclusion

It is important to point out three factors which limited the scope of this course: time, need, and language proficiency. First, this is the only report writing course offered to the maintenance students during their three-year program of study. Second, since all the

students enrolled are majoring in the same field, it is possible to base examples exclusively on the work of the aircraft maintenance technician. Finally, because of scheduling problems, the students who are required to take this course are not placed in homogeneous groups according to their proficiency in English. Therefore, only "survival" skills are stressed in the content, resulting in a highly tailored course to meet very specific needs in a short period of time.

Although the components of the "aeronautical report course" are presented as separate categories, they constantly overlap and interact throughout the learning activities. By the end of the course, the students have built up a small "tool kit" to accompany them on the job where they are confronted with performing visual inspections, doing repairs, and filling out paperwork.

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