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E-language learning for the airline industry

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Abstract

The acquisition of foreign languages for specific purposes through e-learning strategies is one of the areas less researched and developed in the field of CALL. However, as a member of a recently completed Leonardo da Vinci Project, devoted to vocational training, the author will report on the findings of the Airline Talk project. The goals of the project were to supply materials which would promote continuing learning amongst airline staff in three target languages: English, German and Spanish. This paper focuses on the development, structure and language content of the Spanish courseware, *¡Bienvenido a bordo!*, designed at the Universidad Politécnica de Valencia. The author discusses the process carried out by the project partners in order to satisfy learner demands in terms of learner orientation, process orientation and learner autonomy to achieve language competence through the development of *communicative skills* and *interactivity*. Issues that are described include: needs analysis, courseware specifications, exercise template design, graphical user interface and learner motivation. The results arising from the evaluation carried out at two different partner institutions will conclude the discussion.

1 Introduction

The Airline Talk project[1], which commenced in 1997 and reached its completion in 2000, responded to a specific need of international airlines to help those employees who come directly into contact with the travelling public to offer assistance in the passenger's own language. The goals of the project were to supply materials which would promote continuing learning amongst airline staff in three target languages: English for advanced learners, German for higher intermediate learners and Spanish for elementary/

[1]The Airline Talk Project was funded by the European Commission's Leonardo da Vinci Programme. The project partners have been: Thames Valley University (UK) – co-ordinating institution, Pädagogische Hochschule Karlsruhe (Germany), Universität-GH Essen (Germany), Christianshavns Gymnasium (Denmark), University of Limerick (Ireland), Universidad Politécnica de Valencia (Spain), SAS (Denmark), Aer Lingus (Ireland), Iberia (Spain), and Unicorn Training Partnership (UK).

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lower intermediate learners, the latter with native language support in English, Danish and German.

The Spanish materials, commercialised under the name *¡Bienvenido a bordo!* (Welcome on board!), comprise a complete course syllabus which focuses on a number of vocationally relevant language skills. As the materials were designed to meet the specific needs of the learner, *¡Bienvenido a bordo!* focuses on language use in a particular yet broad occupational environment, namely that of international airline staff working at points such as check-in, customer service, lost luggage, transit desks or cabin crew.

2 Design principles

On designing the special purpose course, our aim was to create attractive materials that the work-experienced adult learner would find engaging, especially taking into account the obvious time constraints limiting their study time, and would simultaneously encourage them to apply their own professional expertise to develop the desired level of language competence. One means of achieving this, we thought, was to expose our learners to situations they could readily relate to, concentrating on the language needed to express ideas rather than trying to train them in their particular field of work. These professionals required, therefore, "*operational* materials where the knowledge, the concepts, the instruction and the training are taken for granted, and where it is the ability to function in the foreign language which is the main goal." (Strevens, 1988:40)

This lack of available study time implied that special effort would be put into encouraging the learner's stated intention to learn. Motivation was therefore a key issue to bear in mind. To this end the courseware presents a coherent course structure, which progressively builds upon previously acquired knowledge and skills; it offers a vast quantity of audio input and graphics to enhance language retention; it provides a voice recording device (media player) to simulate near-authentic communication, and the user graphical interface resembles a Windows-type program environment with which most employees are familiar. Promoting language practice and use was also seen to be encouraged by setting tasks directly relating to the learner's everyday practice at work.

The syllabus on which *¡Bienvenido a bordo!* is based can be described as being content-based and situationally organised in the sense that the input was determined by identifying a number of 'scenarios'[2] which are chronologically ordered and the contents arranged to follow the normal course of a journey, from check-in at the departure airport to arrival at the destination airport, thus covering a large range of job-related areas. The materials are accordingly arranged into seven broad sections, each in turn divided into a varying number of lessons that are designed to practise the language needed to deal with various context-related goals (e.g. giving information about flights, etc.), defined in terms of actions and language performance (e.g. helping passengers who need a pharmacy or medical treatment, etc.). The seven sections are:

- Section 1: *En el mostrador de facturación de equipaje* (At the check-in desk)
- Section 2: *Pidiendo información* (Enquiring about specific information)

[2]We felt it necessary to have these scenarios, and the dialogues which arose from them, checked by the project partner airlines so as not to contradict company procedures and regulations.

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Fig. 1. Main menu page in *¡Bienvenido a bordo!*

- Section 3: *En la zona de 'salidas'* (At the departure lounge)
- Section 4: *En la puerta de embarque* (At the boarding gate)
- Section 5: *En el avión* (On board the aircraft)
- Section 6: *En tránsito* (At the transfer desk)
- Section 7: *En la zona de 'llegadas'* (Arrivals)

Prior to entering any of the above sections, the learner is presented with a brief description of the situations that will be encountered in a given lesson, as well as the intended learning goals in order to achieve learner awareness in terms of the language outcome sought. Section 2, for instance, displays the following information:

Sección 2: Pidiendo información
In section 2 you will practise the language needed to deal with situations at the information desks and customer service points in the airport. These include the following:

- Answering passengers' questions and dealing with problems.
- Dealing with passengers who have lost their tickets, boarding cards.
- Dealing with passengers who have missed their flights.
- Giving information about flights, fares, availability and alternatives.
- Helping passengers who need a pharmacy or medical treatment.
- Dealing with a bomb scare, abandoned luggage.

On entering a given section an additional window displays the list of lessons into which the activities are organised, summarised under headings that give a brief account of the situations on which the contextualised activities are based. Because the programme materials were designed to construct understanding and convey creative use of language rather than requesting mechanical responses on the learner's behalf, the course exploits contextualised activities that emphasise the language content along with the structure (e.g. reordering randomly presented sentences according to the sense of the passage,

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filling in gaps to complete a passage similar to the original, etc.) aiming to achieve meaningful and thoughtful interaction between the learner and the programme.

The learning strategies developed offer a progressive development throughout the courseware, each of the lessons being organised into a 'work plan' that is systematically divided into six items contributing towards constructing a whole:

1. An introductory dialogue in the form of a video sequence which can be seen with or without subtitles in order to introduce language in the context of a particular scenario.
2. A grammar activity to introduce specific forms and structures, linked to the theoretical background, and subsequent practice.

3/4. Language functions, notions, use of language and contextual activities.

5. Vocabulary practice.
6. Speaking practice and pronunciation.

For example, Lesson 6 *Vuelo cancelado* in Section 4 *En la puerta de embarque* displays the following six items:

- *Diálogo*
- *Dando instrucciones*
- *Ordena las palabras*
- *¿Verdadero o falso?*
- *¿Dónde está…?*
- *Práctica oral*

The introductory dialogue, *Vuelo cancelado*, illustrates a situation where, due to a flight cancellation owing to 'operative reason', a passenger enquires at the airline information desk and is given instructions as to how to proceed. The next exercise (see Figure 2), *Dando instrucciones* (Giving instructions), intends to extract relevant information from

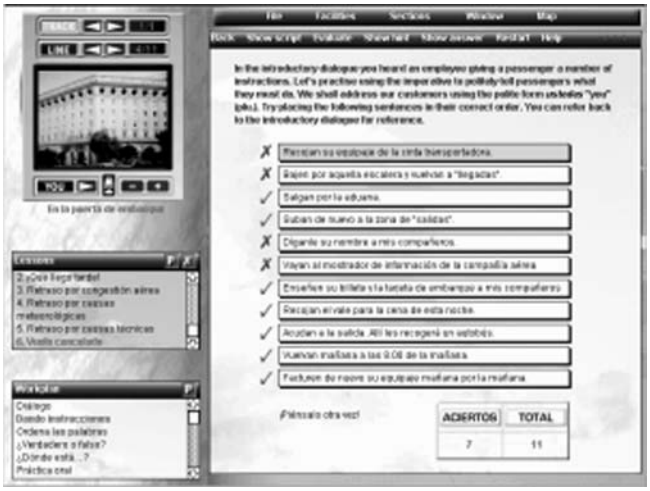


Fig. 2. Section 4, Lesson 6 *Vuelo cancelado: Dando instrucciones.*

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the dialogue and invite the learner to focus on a given verb form, that of the formal second person plural of the imperative, in order to rearrange eleven sentences, quoted from the audio passage, which describe how passengers should proceed in the given situation. Exercise 3 in this lesson continues to focus on giving instructions and requests the learner to reorder segments of several sentences according to the audio input. Exercise 4 is a traditional 'true/false' exercise which refers back to the introductory audio sequence to check listening comprehension. Both these exercises include an 'evaluate' option that corrects learner responses, a score box that visually summarises learner performance and a 'show answer' option that calls up the correct answers. Exercise 5 (see Figure 3) consists of matching an audio input with an image. Learners have to respond to the question *¿Dónde está…?* (Where is…?) by clicking on the appropriate picture. After two incorrect attempts the correct answer is given. The vocabulary practised in this exercise also relates to that in the introductory dialogue with the intention of achieving reinforcement. In the last exercise, the learner is encouraged to practise his or her speaking skills by recording and comparing their utterances with that of the recorded model.

The general course facilities available from within each activity include reference materials such as grammar notes, use of language, and a bilingual sound-enhanced glossary; an audio recording device to encourage voice recording and playback, a printing facility to allow learners to print out a selection of items such as the reference materials, scripts of dialogues, etc., a scoring device in addition to the positive or negative feedback comments, and help and hints to improve student performance, etc., all aiming to provide learners with the necessary tools that will foster language awareness and enable them to discover for themselves the intricacies of its use with the aid of the program.

3 Teaching approaches

¡Bienvenido a bordo! aims to provide the conditions in which learners can develop communicative competence in their own way and in their own time. This, we think, is



Fig. 3. Section 4, Lesson 6 *Vuelo cancelado: ¿Dónde está…?*

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achieved by taking advantage of even the limitations of what a computer program can do, offering a default route to follow, offering a variety of activities and developing a progression which moves from receptive to productive skills. Various strategies have been included, designed to encourage problem solving and interaction in the learner's work place, an arduous task since the problems that arise at airports or in aeroplanes are, more often than not, expressed by passengers in a disorderly and ill-defined manner; in addition, human interaction, when dealing with the travelling public, can sometimes be strained by situations of stress that arise from flight overbooking, delays, bumpy flights, etc. The courseware thus aims to provide the necessary communicative skills to allow airline staff to successfully deal with these crisis situations. In this context, the problems that arise are to a great extent self-defined and repetitive: think of a flight cancellation, for instance; and the professionals who have to solve these problems have not caused them originally but, instead, have to register the problem, interpret it, explore all possible solutions and come up with the most satisfactory solution for all parties involved (airline management, employee and customer). One of the exercise types developed in Airline Talk to practise argumentation and negotiation skills is the branching dialogue activity where the learner is offered a range of choices that will lead to a successful or an unsuccessful act of communication.

Within this general course outline, the courseware combines several interrelated teaching approaches; from the more LSP-oriented approaches such as the functional/notional approach, through the more traditional language form approach that primarily focuses on structures, to a more contextual approach. Among the approaches that were applied to determine the course design and structure, the functional/notional approach allowed us to specify the desired learning outcome in terms of language functions (e.g. making a request, advising a passenger on how to proceed), general as well as specific notions (e.g. duration, location), and rhetorical skills (e.g. extracting information from a dialogue). The language form approach helped to shape the structures that were present in the language functions in order to achieve learner awareness as to the linguistic forms being used, and the contextual approach enabled us to determine the situations in which the functions, notions and structures were embedded.

4 Needs analysis

To determine these specifications a thorough needs analysis was carried out by submitting our target groups to a detailed questionnaire that would enable us to gather the relevant information to start designing the software. The survey related to background knowledge, language needs and learning requirements. The results of the needs analysis not only determined the language contents and levels our target groups were particularly interested in but, more importantly, how we could offer solutions through technology to enhance their learning process. The results conveyed a specific need to focus on spoken language, rating both listening and speaking skills as very important, and the main purpose of interaction was claimed to be that of routine situations. Providing self-directed learning materials specific to the airline sector was viewed as a very welcome development. In the last stages of the design process an appropriate communicative methodology was applied (e.g. role playing, simulations, information gap activities, problem-solving activities) in order to get from the course specifications

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to the desired outcome in student behaviour. A large number of task-based activities, where the objective was to encourage and practise a number of discourse features such as 'calming a passenger', 'describing a process', etc. driven towards developing speaking skills, were also included.

5 Design templates

Since the Airline Talk project involved approximately fifteen project partners, nine of which were directly involved in the design and development process of the project, working in ten different institutions, across five different European countries, the template approach to software design and implementation was adopted. That is, the software programmer and the subject specialists agreed upon the exercise types, reference materials and overall functionality of the software before the design phase actually started. Because all the elements that comprise a multimedia course are interconnected, the templates took into account every feature to appear on the screen at a given moment, i.e. links to and from exercises to reference materials, media to be included, etc. Having undergone this task the conclusion was reached that with a relatively small number of design templates, a course could be designed that would be based on a sound pedagogical approach and include a large variety of activities by merely redefining some of the more traditional exercise types. Our templates, of course, did not comprise the total amount of possibilities available in designing CALL activities. That was not our basic aim. More importantly, they helped the courseware designers, located in different countries, to follow exactly the same design structure and thus permit the software programmer, also located in a different country, to integrate every 'programmed occurrence' in its correct place within the software program. Each language course developed within the project was therefore programmed in an identical software template, thus reducing the programming time and cost required in multilingual software development projects such as the one described here. An additional advantage was that this type of design approach allowed us to create flexible and adaptable materials that could readily be adapted into other languages.[3]

6 Evaluation

Evaluation of *¡Bienvenido a bordo!* was carried out at two of the partner airline training centres, Aer Lingus in Dublin and SAS in Copenhagen, at the end of the project, providing summative evaluation to the work of the project. However, this evaluation has also had a formative effect on the final product commercialised by Unicorn and on the follow-up project, Airline Talk 2.

The specific objectives of the evaluation were to investigate whether the CD-ROM meets the learning needs of the target group, i.e. learners of Spanish employed by the airlines, in terms of content and design; to investigate the reactions of language teachers who had not been involved in the writing of the materials; and to identify any remaining

[3]In 2000 the Airline Talk Project was extended to develop French and Italian materials, incorporating academic partners from institutions in France and Italy, as well as a new airline partner, Air France.

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technical or other snags. The following strengths of the program were highlighted by the learners:

1. The user instructions are very useful as they are there from the very beginning, thereby speeding up the start-up process. Had they been hidden behind File, Facilities etc., they might not have been noticed.
2. Printing is quick and easy, an excellent facility.
3. Subtitles are very handy and they are easier to follow than the transcript.
4. The use of English is quite minimal, therefore causing the learner to think and learn Spanish from the beginning.
5. The pictures offer great assistance in interpreting words and phrases and avoid excessive dictionary use.
6. Each section goes into great detail and offers a good range of situations that could occur in the course of working with an airline.
7. The speed of the dialogues gives the feeling of the language being real.
8. The dialogues give a general feel to the whole language area to be studied. The situations and language used are very appropriate to the needs of airline personnel.

To conclude, the appropriacy of the situations and the language involved was particularly praised. The following weaknesses of the programme were highlighted by the learners:

1. Most users needed to install *Quicktime* on their PCs before using the programme. It would have been useful if instructions for downloading *Quicktime* could have been given, e.g. the web address.
2. Learners expectations of a structured programme starting with a Unit 1, covering the alphabet, numbers, colours and other basics, was not met. An explanation at the beginning or in accompanying notes would help to reassure learners.
3. The lack of some basic instructions, such as *Click here to hear Model* was highlighted by several learners. Another example cited by a number of learners was the lack of instruction for the use of the language laboratory, e.g. “How do you record yourself”. [This links to the point made elsewhere in the report that many of the intended users are not familiar with this type of language learning material.]

In terms of pedagogy the language teachers who evaluated *¡Bienvenido a bordo!* stated that the strengths of the program were:

1. A very appropriate focus for a programme for this sector, i.e. listening and speaking.
2. The learner is made to feel that s/he is at the centre of the learning process.
3. There is a very strong sense of self-directed learning and it is the learner who controls the programme and adapts it to suit their own needs.
4. The programme would suit the learning styles of most students.
5. The students become familiar with the pattern of the workplan quite quickly. The instructions on the left enable the learner to choose from the different language

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areas and the menu allows as much practice of the language point as the learner feels necessary.

6. The listening tasks also offer the students the choice of reading the script of the audio text which is an important aid to students at an elementary level and for visual learners.
7. The exercises are excellent, particularly for revision.
8. The grammar practice exercises provide a well-presented theoretical explanation.
9. Good variety of vocabulary exercises. The use of picture associations for vocabulary exercises is very useful for reinforcement.
10. The programme also focuses on pronunciation and spelling in many of the vocabulary practice exercises, which is extremely important at this early stage of language learning.
11. Although the language laboratory requires a little patience to work out, it is an extremely useful and necessary facility on a programme such as this in that it gives students the opportunity to practise all the language related to the specific section.
12. Being able to compare the language lab exercises with the original dialogue serves as a self-assessment approach to the model, so students can see which areas require extra work.
13. It is good that the instructions and interface are in L1 at this level.

The weaknesses stated were:

1. The language is Castilian Spanish. Considering how international the airline business is, it would have been useful to expose learners to other accents, e.g. Latin American.
2. This programme would be less suitable for learners who need more teacher support and/or who enjoy collaborative learning.
3. Learners may not have access to a PC at regular intervals or on occasions when they might have time to learn, e.g. stopovers, thereby making the programme less portable. An accompanying textbook or audio-cassette would allow learners to continue their learning in a variety of arenas, thereby maintaining interest in the programme and encouraging learners to resume their course using the CD-ROM at the first available opportunity.

These observations, we think, summarise many of the goals that the project partners set forth to achieve when designing the materials, i.e. to create a flexible learner-centred program, focusing on listening and speaking skills based on vocationally relevant contents that would encourage self-directed learning suited to a variety of learning styles.

In designing *¡Bienvenido a bordo!* we have tried to follow a constructivist conception of learning where knowledge is seen to be constructed by the learner in acts of understanding. That is, meaning is created by the learner, not simply received. Bearing this in mind, the 270 exercises (arranged in 45 lessons) contained in the courseware have been embedded in a media rich environment and have been written taking into account that learning is context-sensitive: the learner will bring to the learning situation an accumulation of assumptions, motivations, conceptions and previous knowledge, which will

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largely determine the nature and quality of learning which takes place. Since the materials were designed for elementary learners of Spanish for specific purposes these elements were given prior consideration with the aim of fostering effective learning. The degree, therefore, to which we intended *¡Bienvenido a bordo!* to encourage or facilitate the development of understanding was by:

1. promoting *relational learner responses* to all the tasks that make up the entire course – where the components have been integrated into a coherent whole and each part contributes to the overall meaning (understanding as appreciating relationships);
2. avoiding learner responses which arise from tasks not being carried out appropriately because the learner has not understood the point (therefore no language retention takes place);
3. avoiding learner responses which arise from only one or a few tasks being understood and used (therefore only isolated language components are acquired);
4. avoiding responses which arise from several aspects of the task being acquired but treated separately (therefore language components are acquired but no relationships made).

Our main goal was to involve the learner in integrating the new knowledge and skills into a coherent structure, thus achieving understanding by making meaning.

7 Airline Talk web site

The CD-ROMs developed in the project have a direct link to the multilingual[4] Airline Talk web site which offers additional information for learners using the language materials, under five headings:

- Information desk: where general information concerning the project, its partners and the products, including general and technical features, can be found.
- Shopping mall: information on how and where to purchase the learning packages.
- Language desks: in addition to offering an archive of supplementary exercises in all the project languages, this section includes a selection of jokes relating to the airline industry and links to airline humour web sites.
- Technical support desk: to offer solutions to possible technical problems.
- Links: relating to language learning in general, specific language learning for aviation purposes, computer assisted language learning and online language learning.

As well as helping to disseminate the project and its products, the web site has been designed to serve as a liaison between the end users – airline staff – and the project partners, each of whom will tutor the learners in their particular field of expertise.

[4]The Airline Talk web site (http://www.airline-talk.com) is currently available in five languages: English, German, Spanish, French and Italian.

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