

COMMUNICATING IN ENGLISH BETWEEN PRINCIPALS AND SUBCONTRACTORS IN AIRSPACE AND AUTOMOTIVE INDUSTRY

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ABSTRACT

CADOS is a language project developed within the EU Leonardo da Vinci programme and co-funded by EC. This project focuses on the development of language skills for communication in technical English between principals and subcontractors in aerospace and automotive industry. Therefore the following subject-field related modules are offered: Introducing the company, Negotiating a contract, Research and Development, Production, Planning and logistics, Quality management. Each module is based on authentic materials collected in industrial plants and processed into a series of listening/video sequences followed by task-based exercises. The materials have been developed in the Telos Language Partner programme, template-based multimedia author software. A method of blended learning forms the basis of materials exploitation in practice; learners can work either independently or under the teacher's guidance in class or even in international teams. The platform Moodle has been used because it enables a comprehensive approach to learning tasks including their supervision and continuous assessment. To provide a feedback on the materials already produced, an integral part of the materials development was the testing divided into piloting for the first three modules and international networking for the last three modules. While piloting was done locally at the individual partner institutions, networking was carried on in international teams of five participants from France, Czech Republic, Latvia, and Finland. Each team was supervised by a tutor from the respective partner institution. Questionnaires were created for final assessment of testing for learners and teachers. These questionnaires then served as a basis for materials final amendments. The final output of the project is a multimedia language package available on the web as well as on DVD for employees of industrial companies and students in mechanical engineering. CADOS is language for getting things done, for people who roll up their sleeves and make things work.

Introduction

Many industrial companies in Europe have working relations with other companies from Europe or overseas, either as subcontractors, subsidiaries, mother or sister companies. The staff in the production services must regularly communicate with their counterparts in other countries on technical matters linked to research, conception, engineering, quality management or maintenance. The language used to communicate is mainly English, although it is very often neither partner's native language. However this target group of technical employees has very often neglected the learning of English and what they especially lack are communication skills. The impossibility for technical staff to be able to communicate in English then often hinders international cooperation between industrial companies. Learning a foreign language is costly in terms of time and travelling to go to organised courses; new formulae, which are adapted to the situation of this target group should be searched for.

Therefore the aim of the project entitled Communicating in English Between Principals and Subcontractors (CADOS) is to create an on-line training course to improve communication in technical English within the above mentioned target group of end-users. This course is based on the most common situations this specific target group meets in their day-to-day relations with the aim to initiate



these end-users to blended-learning through the use of the Internet. The on-line course also aims to make the technical staff working for different industrial companies in different European countries learn together and from one another in a common language.

The partnership, which has been constituted for this project, includes specialists in foreign language teaching, Universities of Technology, a University specialised in linguistics, as well as professional organisations representing industrial companies in France and in the United Kingdom. The project is backed by companies from France, the Czech Republic, and Finland. Among the nine partners, four are in charge of the conception of the course, five are in charge of piloting the draft materials, one in charge of validating the lexical range, and all are involved in dissemination and valorisation, especially the professional organisation for Mechanical Engineering in France as well as a group of subcontractors in South-West France.

1. Methods and Materials

1.1 Training material description

The Leonardo da Vinci project CADOS addresses the needs of small and medium-sized companies in Europe with regard to work-related English language learning solutions. CADOS exploits the pedagogic potential of multimedia and e-learning technologies to provide opportunities for authentic and collaborative language learning activities in the particular thematic areas. Each of these areas is represented by a learning module that is composed of 4 to 8 units. The final training package contains six modules: Introducing the Company, Negotiating a Contract, Research and Development, Production, Planning and Logistics, and Quality Management.

A module unit typically contains a video clip or authentic dialogue along with further exercises, both receptive and productive, to practise comprehension, communicative functions, vocabulary and grammar.

The CADOS multimedia materials use the Telos Language Partner learning platform which can be used both offline (DVD) and online (Internet), in classroom teaching or as self-study material. The materials have been developed in the Telos Language Partner programme, template-based multimedia author software. A method of blended learning forms the basis of materials exploitation in practice; learners can work either independently or under the teacher's guidance in class or even in international teams.

The platform Moodle has been used as a main source of work with the materials because it enables a comprehensive approach to learning tasks including their supervision and continuous assessment. Pedagogic integration in Moodle-based e-learning courses also facilitates communication and interaction among learners and tutors.

1.2 Training material development

Development of training materials was divided into several phases. First, raw materials for the training package were collected in industrial plants in order to reflect the real situations that the end-users face in their everyday working life. These materials were then collated and processed into a series of listening/video sequences followed by task-based exercises. The authors of materials were introduced into Telos and instructed thoroughly about how to use the templates for the respective types of task-based exercises.

Telos is template based; i.e. the author does not have to worry about the screen layout of his/her work packages, a skeleton is provided which is then only filled up with the author's own content. Telos does all of the technical management, so no programming skills are presupposed. Telos can accommodate sound files (wav files), video files (avi files), pictures (bmp and jpg), and, of course, text. Via its linking function, the author can embed other types of files, e.g. Acrobat files (pdf files), web links (html files), and animations (e.g. Macromedia flash films). There are three basic types of Telos templates:



presentation templates (these templates help the author to present material to the learners, e.g. dialogues, monologues, video clips), explanation templates (these templates are used to explain things to learners and to give instructions or help), exercise templates (these templates are used to practise with the material that has been presented to the learners and to induce learners to explore the material in more detail). This is a short summary of the offline Telos templates: gap fill template, text production template (via several model solutions), question/answer template (via several model solutions), explanation template, multiple-choice template, select template, drag/drop template, and flexible drag/drop template. However Telos cannot relieve the author of the burden to think of a pedagogically suitable way to deliver multimedia material and cannot provide a way of how to optimally integrate the material with other tasks in the classroom.

An important part of material development is a continuous check-up of designed units. Draft materials were therefore placed on a common platform accessible to all participating authors who checked them one after another and reported the mistakes that were then corrected by the respective authors. When this was completed, the units underwent testing.

1.3 Training material testing

To provide a feedback on the materials already produced, an integral part of the materials development was the testing phase divided into piloting for the first three modules of the project and international networking for the last three modules. While piloting was done locally at the individual partner institutions, networking was carried on in international teams. Questionnaires were created for final assessment of each stage of testing for both the learners and the teachers. These questionnaires then served as a basis for materials final amendments. For the purposes of testing, manuals were created for both the teachers and the learners to navigate them through the piloting/networking course (Moodle manual for teachers to give an introduction to the relevant Cadus networking activities in Moodle and Moodle manual for learners for the Moodle introductory session).

Piloting was performed in the respective partner countries individually under the guidance of the tutor. The first three modules were tested through end-users' questionnaires to evaluate not only the materials developed (Telos learning modules were assessed in terms of technicalities and linguistic content), but also the local sessions in terms of content, teaching methods, tutor's availability, etc. The closing part of the questionnaire was devoted to the overall evaluation including the concept of CADOS, contents and subjects in CADOS, relevance of topics, learning tasks, learning objectives, level of language required, etc. To facilitate the learners' work with the materials, they were provided with the manual Learners' aid Telos developed in English but also offered in learners' mother tongues (German, Czech, Finnish, French and Latvian).

International networking is the combination of online self-study of materials (the Telos modules) and actual networking (i.e. international, collaborative work) on the topics covered in small, international teams. The course with all materials was available at the online course platform Moodle. The international networking groups were made up of five participants from France, the Czech Republic, Latvia, and Finland; each team was supervised by a tutor from the respective partner institution. In addition, there were several local, real-life meetings, with the particular local, national tutor. At the end of the course, participants of international networking were provided with the networking certificate confirming their active involvement.

Feedback from the learners, collected both on the basis of questionnaires and also through a direct contact with tutors, was mostly positive in terms of blended learning, adaptation to this type of course, supporting materials provided (Moodle Guide, Didactic Guide), learning objectives, comments on the use of Moodle and Telos in general, use of computer in language learning, tutor's knowledge of technology used, etc. The most common complaints were concerned with the length of the course (too short), more careful choice of participants (too varied), clearer instructions, topics closer to participants' professional interests and needs. The most positive finding was that 75% of participants showed interest in taking part in another project of this type.



2. Results

The main objective of the project CADOS was to design and develop a multimedia language package available on the web as well as on DVD for employees of industrial companies and students in mechanical engineering. As described above the final training package contains six modules: Introducing the Company, Negotiating a Contract, Research and Development, Production, Planning and Logistics, and Quality Management. Module 1 includes the following units: History, Human resources, Quality and Costing. Module 2 includes six units: First meeting, Technical specification, Costs, An urgent request, Payment terms, Arranging a progress review. Module 3 deals with research and development: First videoconference on reception of study, Changing the length, First test articles, Solution from the university, Approval for serial production. Module 4 is concerned with production: Introduction, Visual and tactile quality control of raw materials, Shaping the soap tablet and adding logo, Pressing operation and temporary boxing for drying, Palleting for storing and the complete process, Packing and final inspection. Module 5 is divided into 8 units: Confirmation of order, Quantities, Delivery, Packaging, Delay, Shipment's ready, Payment, Reminder. Module 6 describes quality management in six units: Documents, Non-conformity (part 1), Non-conformity (part 2), Non-conformity analysis & corrective actions, Preventative actions, Audit.

While modules 1 and 4 are based on video clips, the remaining modules start with listening passages in the form of dialogues. The units follow the same sequence of exercises starting with the introductory exercise summarising the video clip/listening dialogue with the aim to introduce the necessary vocabulary. Receptive exercises are focused on comprehension check-up and practising vocabulary or grammar presented in the videos/dialogues through e.g. gap-filling activities, choosing correct alternatives or answering questions. The main aim of this series of exercises is to make the learners acquire the largest possible amount of vocabulary and language skills based on the videos/dialogues. Productive exercises then offer additional material to practise speaking and writing related to the respective topic.

An integral part of the training package are supporting materials represented by guides for both the authors/tutors and learners; these guides do not only provide the necessary navigation but through several language versions help the learners overcome difficulties with specific navigation terminology.

Another important output of the project was an on-line networking course as continuation of activities described above. This course represents a collaborative environment where the learners and tutors from different participating countries work together on common tasks with the aim to exchange the information about the topics based on the materials from CADOS modules, to discuss and assess the contributions of other participants. The four topics were selected and completed within the networking course: Getting to know each other, Quality management – Describing non-conformities, Tour of the factory, Research and development – Finding a solution to the problem. Both the learners and the tutors worked in Moodle environment that offers a variety of appropriate activities e.g. assignment, forum, wiki, chat, etc. Assignments allow learners to upload digital content for grading; they can submit essays, spreadsheets, presentations, web pages, photographs, or small audio or video clips. A forum is a powerful communication tool within a Moodle course where tutors and learners can post messages to each other while easily keeping track of individual conversations. Forums allow them to communicate with each other at any time, from anywhere with an Internet connection. Because forums are asynchronous, learners can take their time composing replies. They can draft and rewrite until they are satisfied with the results instead of feeling under pressure to respond immediately. A wiki is a collection of collaboratively authored web pages. A wiki starts with one front page; learners can edit the page or add more pages to the wiki by creating links to new pages that do not yet exist. Old versions of each page can be viewed by checking the page history. The Moodle chat module is a simple synchronous communication tool allowing tutors and learners to communicate in real time. It very much works like other instant messaging systems like AOL, MSN, or iChat, or the Skype chat function. In a chat, everyone needs to be logged in at the same time in order to communicate. The main contribution of the networking course was a positive response from the learners not only on the material arising from CADOS modules but also on web-based collaborative language learning in international teams.

The last but not least output of the project CADOS was a build – up of multinational team of materials developers and tutors who put a lot of efforts into development and testing of CADOS multimedia



package. This team will continue to actively work with CADOS modules in their own language courses both at educational institutions or directly in industrial plants.

Conclusion

The importance of adequate communication between technicians seems to be crucial in today's global economy. The lack of appropriate language skills to express opinions, to present products, to negotiate a contract, to describe research results, etc. is a hindrance in the development of the company. Therefore industrial companies are interested in employees who are well equipped with language skills, in particular technical English. The output of CADOS project represented by a multimedia training package to practise language skills in technical English strives to contribute to the materials developed for this specific group of end-users. Web-based language learning is of particular interest for industrial companies where in-company language courses are not cost-effective. Moreover technical staff is computer literate so on-line language teaching is highly appreciated. However unlike self-study, blended learning where teacher/tutor is available seems to be more effective provided that it is well organised. The training multimedia language material developed within the CADOS project offers a flexible approach to language learning where end-users themselves can decide about a degree of their involvement in language acquisition.