Encyclopedia of Networked and Virtual Organizations

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Collaborative Work Training in Higher Education

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INTRODUCTION

In recent years, the influence of information and communication technology (ICT) has transformed the professional practice of translation and, consequently, led to the introduction of new techniques, methods, and media in the university teaching environment. The new technology has made professional translators' work easier but, in order to ensure translation studies graduates meet employers' needs, ICT must occupy its rightful place in their training. The ever-demanding market expects would-be professionals to be able to access the subject matter of any text, use a wide range of computer tools proficiently, and be versatile enough to master all aspects of the translation process. Today, the market place for translation can justly be described as global, decentralized, specialized, dynamic, virtual, and demanding (Aulaint, 2005).

In response to these new needs, at the University of Granada (Spain), a professional approach to translator training (PATT) has been designed and applied to bring students closer to the current professional environment and its challenges. The PATT approach stands on three pillars: first, the construction of a Web site where all information generated by tutors and students is administered; this serves as an operational base and meeting point for teacher-researchers and students. Second, the use of a collaborative work platform (BSCW) through which students acquire the basic experience needed to function in the professional world and develop both team and teleworking skills. Third, the design, development, and application of optimal tools to collect and analyze data on student opinions. The use of questionnaires before and after the learning experience and the study of log files, multiplies the opportunities to analyze data, assess use of the BSCW platform, and study the application of PATT.

In this context, the present study reports research performed in the faculty of translation and interpreting of the University of Granada (Spain). Our objectives were to analyze student satisfaction with PATT, an innovative teaching method designed in response to the new demands of the professional translation market and to assess student use of the BSCW platform.

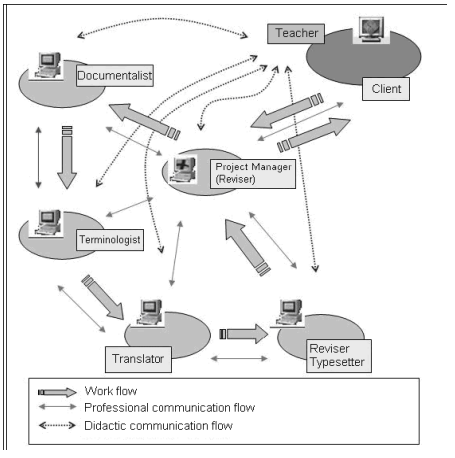
A PROFESSIONAL APPROACH TO TRANSLATOR TRAINING (PATT)

The PATT model offers students a dynamic, virtual experience of professional translation practice and familiarizes them with a simulation of real-life collaborative work environments. Data from the post-course surveys administered indicate the suitability of this method for teaching students about teleworking from a practical standpoint. Analyses have been highly effective in establishing levels of student satisfaction and of student acceptance of PATT. After PATT, translation students seem to have improved their computer skills and assimilated sophisticated teleworking skills, moreover, their attitude toward teamwork has shown a marked change for the better.

As previously stated, teleworking is crucial in professional translation. Alcina (2002) states that "familiarising translation students with a virtual environment helps them to acquire the professional skills that will be demanded in the future, since in the current information society translator's work demands the automation of most tasks, the use of teleworking and, on many occasions, distance team working." We believe PATT contributes to strengthen students' teleworking skills.

PATT is currently being applied in the teaching of several translation course modules involving language combinations of Spanish with English, Portuguese, Italian, and Russian (Olvera-Lobo et al., 2006). Students are divided into groups, each one of which is in charge of managing a different translation brief. Each team is made up of five students (Figure 1), each of whom takes on a role as information scientist, terminologist, reviser, desktop publishing editor, or project manager. In each new translation brief, team members adopt a different role so that every student carries out all of the different tasks during a full course module. The involvement of teachers during the development of projects is important as they supervise the evolution and progress of the translation briefs. Consequently, students have the opportunity to gain an insight into each stage of the translation process and its connection to the whole process as part of their training at the University. Through this approach, they can experience the complementary relationships between different course modules and their importance within the syllabus. Thus, self-directed learning is strengthened because, although students are assisted by their tutors,

Figure 1. A professional approach to translator training application using basic support for cooperative work



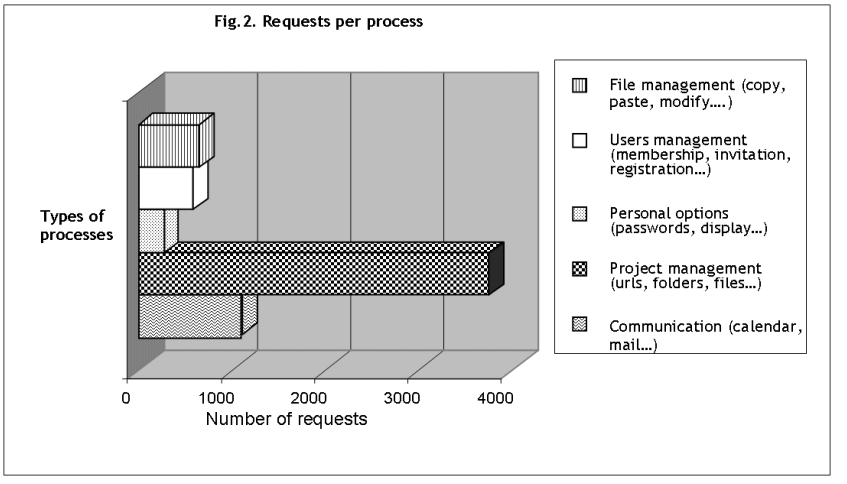
they are the ones responsible for meeting the demands of the team member who is the next link in the chain. In this respect, the fact that professional relationships are established between students via electronic media strengthens the development of teleworking and tests students' communication skills.

Consequently, the objectives of our approach to translator training are: (a) to familiarize students with the methods of work typical of translation agencies by recreating the production line of the professional workplace; (b) to develop teleworking in teams, self-instruction, and interdisciplinarity; (c) to offer a work setting and the tools needed by teachers and researchers to incorporate ICT in the classroom and, at the same time, to offer them the chance to reproduce the environment of the professional work context within the academic world; (d) to obtain first hand information as to the impact of ICT on university teaching; and (e) to promote coordination between subject matter areas in the university teaching of translation.

THE COOPERATIVE WORK PLATFORM: LOG FILE ANALYSIS

The use of cooperative work computer programs has been essential in teleworking. Consequently, in addition to using the Web site, the students share their tasks and publish their results on the BSCW *(basic support for cooperative work)* platform, which is widely used for a range of purposes in other universities (Becking & Schlageter, 2002; Sikkel, Gommer, & Veen, 2002; Sales,

Figure 2. Requests per process



2001). The use of this tool is justified by the need for an information exchange system that permits synchronous communication, which is, at the same time, more efficient than software such as that typically used for FTP protocol *(file transfer protocol),* for example.

BSCW is free software designed by the cooperative systems department of the FIT (Institute for Applied Information Technology), which belongs to the *Forschungszentrum Informationstechnik GmbH*. This system allows users to create and share different workspaces in order to exchange objects (documents, Web pages, calendar appointments, a discussion forum, among others) between registered users, regardless of the computer platform used for the connection. Access to the workspace is via any Web browser, which makes it easier to locate information stored in folders, files, and other entries (discussions, e-mails, or alert systems).

Once the students log into the platform, teachers cannot control the tools used to carry out the translation process. Nowadays, log files are commonly used in software assessment in order to detect areas, which are problematic or underperform, as well as to analyze the behavior of users when interacting with the software. We focus on analyzing the way students actually use the BSCW tools so as to discover those most frequently used and, hypothetically, the most valuable in teleworking. The most efficient manner to handle this task is through the transaction file analysis automatically generated by the platform, since it registers all transactions between users and the cooperative work tool. This system offers a reliable mechanism to discover the activities carried out by the students while working within the platform and guarantees total transparency of the data produced.

The tools most frequently used by our students during the period studied were those which permit the virtual management of the cooperative projects (Figure 2), which coincides with Appelt's analysis of BSCW system use (2001). Options such as managing folders, uploading objects (documents, images, URLs), or revealing the history of these objects are all fundamental as their high level of use shows. On the other hand, other kinds of tools, more oriented toward the communication among different groups' members in our case, have been less necessary. This may be explained by the fact that the students meet in class almost every day. For example, it is especially interesting to see the minimal use of the discussion forum, especially as this is an instrument that would be useful for communicating global doubts or comments.

Student behavior is probably better explained by the adaptation of previously acquired computer habits to the work platform environment rather than by lack of interest. If this is true, a specific training module on the underused tools might be required. BSCW, as a way for organizing the work of a group of individuals with a common goal and specifically within the frame of our project, does seem to be a reliable platform with many tools, which help students to carry out their translation briefs. The differences concerning cognitive skills and interiorized behavior patterns may well be revealed in a work platform. In fact, the question is not which applications are under-used but which applications would be more frequently used if students had the same amount of practice in all tools.

COLLABORATIVE WORK TRAINING: STUDENT OPINIONS

Virtual classrooms have gained importance over recent years, which has led many universities to launch virtual platforms or environments (Butler, Whitehead, & Winkleman, 2001; Kollias & Kikis, 2004; Massiello, Ramberg, & Lonka, 2005). The appearance of a new didactic model, which is far from the traditional system of masterclasses, implies that teachers and researchers must evaluate the tool in order to justify the existence of the new model. Baroudi, Olson, and Ives (1986) state that a high level of user satisfaction with a given system promotes better use of that system. In this sense, measuring the individuals' satisfaction is a clear way to validate the model. This idea is supported by several recent studies regarding user satisfaction with virtual learning environments (Coppola & Thomas, 1999; Kollias et al., 2004; Massiello et al., 2005).

Questionnaires are normally given on completion of the learning experience (Coppola et al., 1999; Hong, 2002; Hong, Lai, & Holton, 2003; Kollias et al., 2004). In general, students show satisfaction with virtual environments (Collins, 2000; Fredericksen et al., 2000; Kollias et al., 2004; Motiwalla & Tello, 2000; Oliver & Omari, 2001; Swan et al., 2000; Yeo et al., 2002). Questionnaires completed at the end of the experiment also reveal other interesting results. Hong et al. (2003) state that members of a virtual classroom appreciated flexibility and teamwork, felt motivated, and improved their computer knowledge. Carswell (2000) notes this same idea in a study of distance learning, as does Collins (2000) in an experiment with biology students. Finally, Kollias et al. (2004) point out that students use the collaborative work platform along with other cybernetic tools.

Sometimes questionnaires are administered prior to introducing students to the didactic model. In these cases, the information sought mostly relates to the students' attitude toward information technologies and their prior level of knowledge of computer tools and virtual environments (Hong, Ridzuan, & Kuek, 2003; Massiello et al., 2005). Yeo et al. (2002) point out that user determination to choose a system is influenced by its effectiveness and easiness. However, effectiveness and easiness do not seem to be the only reasons students are interested in this type of environment (DeLone & McLean, 1999; Lederer et al., 2000; Venkatesh & Davies, 2000). Other explanations for user satisfaction are related to general attitudes toward technology, the quality of information, previous experience, and the impact of the system's organization.

The sample group in our survey consists of 128 students (fourth-years 70%, third-years 15.5%, and second-years 14.5%). The students were registered in some of the following subjects: Spanish-English Translation level 9 (45.3%), Spanish-English Translation level 3 (24.3%), Italian-Spanish Translation level 4 (13.3%), Russian-Spanish Translation level 1 (7%), Portuguese level 3 (6.3%), and Russian-Spanish Translation level 4 (3.9%). The majority of the students (73.6%) were under 23 years old and most were women (82.5%). Because of the variety of courses and subjects, there was no fixed number of assignments to be completed, but the majority of the students (67.3%) participated in fewer than four translation projects.

Data was collected through two kinds of questionnaire, with some fifty questions in each. They were completed anonymously, one before and one after student participation in PATT, in order to most effectively measure student perception of changes in their level of satisfaction and knowledge improvement. A reliability analysis (Cronbach's alpha) was applied after processing all data in two different matrices of SPSS 12.0 (one for pre-course and the other for post-course questionnaires) to verify the validity of the questionnaire. In our study, the value of Cronbach's alpha in the pre-course questionnaire is >0.9 (.902) which can be considered excellent. Moreover, the value for the post-course questionnaire is 0.802, which can also be considered good. These figures clearly confirm the reliability of our questionnaires as research instruments.

Few existing studies try to measure the level of user satisfaction before and after participating in a specific didactic model, which was the objective of the present study. Recent research carried out by Massiello et al. (2005) is a noteworthy example of the "before and after" questionnaire method, but we cannot rely too heavily on this study as a reference because its field (microbiology) is so different from ours.

The majority of the questions were closed and included ordinal answers with scales ranging from 0 (minimum) to 4 (maximum). The questionnaires were in two parts: Part 1 gathered demographic information (age, gender, course, subject; post-questionnaires asked about deadlines and the number of translation briefs completed). Part 2 collected information through a series of general questions: in the pre-course question-

naires, students were asked about their attitude toward the use of the collaborative work platform, and in the post-course questionnaires, they were asked about their satisfaction with the project.

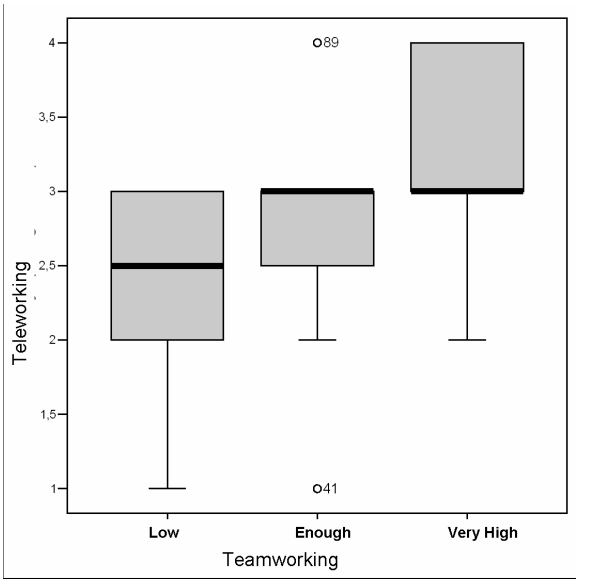
Analysis of the answers shows that 53.7% of students did not have an extensive knowledge of our project before the experiment. Methodological proposals were also new to them. Some 67.5% of students thought that our experience could give them something *quite* or *totally different* by comparison with traditional didactic models; 93.5% recognized that they were not familiar with any collaborative work platform. Consequently, 93.5% also stated that they had never worked with a collaborative work platform. In addition, before the experiment, students thought that PATT could be *a bit* or *quite* useful in the fulfillment of translation briefs.

After participating in the project, most students expressed their satisfaction with it: 64.9% stated that PATT *quite* or *totally* fulfilled their expectations**.** Similarly, 61.7% thought that PATT had given them something different from traditional didactic models. Reported student satisfaction was even higher with respect to the overall results of translation briefs, which they found *good* (62.8%) or *very good* (30.6%).

In the initial questionnaire, most subjects reported they knew *nothing/little/something* about teleworking; 79% did not have any experience of teleworking; more than 50% thought that teleworking would facilitate the translation process, meaning they had a good impression of or feeling about teleworking even if they did not exactly know what it was for. Post-course questionnaires indicated that students believed they had familiarized themselves with teleworking thanks to PATT. In fact, 72.4% of students reported that teleworking facilitated *enough* (45.5%) or *totally* (26.8) the fulfillment of translation briefs for this study.

In the open-ended questions included in the post-course questionnaire, students affirmed that they had familiarized themselves with teleworking ("I have learnt exactly how teleworking works" or "the possibility of distance assistance"). These statements confirm the suitability of this experience, not only for translation but also to promote increased knowledge of teleworking among students (Fig.3). In fact, the figures demonstrate this increase in knowledge, at least from the students' point of view. High averages in all categories related to teamworking, before and after the experience with PATT, indicate that students have always considered this aspect fundamental with regard to translation assignments.

Figure 3. Post-course teamworking and teleworking opinion



In pre-course questionnaires, only 16.7% of subjects recorded a *low or very low* overall attitude toward teamworking. In the post-course questionnaires, no cases of *very low* satisfaction were recorded. Only 6.2% of the subjects reported *low* overall satisfaction with teamworking.

Data on variables related to teamworking collected before and after PATT suggest that the virtual classroom has served to improve students' overall attitude toward teamworking and, as in the case of Hong et al. (2003), it has signaled that students are generally satisfied with this aspect of translation tasks. Students frequently declare that the emphasis on teamworking is one of the main differences between PATT and traditional models ("I have learnt how to work in teams with unknown people"; "It is a useful work tool because it makes teamworking easier"; and "You really learn how to work in teams").

In response to the questions about collaborative work, students reported that they have *often* (45.3%) or *sometimes* (28.1%) used BSCW for translation projects and that they find the platform useful. This is demonstrated by the fact that 72.7% of students find the platform *quite* or *totally useful* for the fulfillment of this type of translation brief**.**

Keeping these figures in mind, it is not surprising that 97.6% of students reported that they would

recommend participation in the PATT work model to other students.

CONCLUSION

This study presents a research study carried out at the Faculty of Translation and Interpreting of the University of Granada. The objective was to analyze the satisfaction of students registered on several courses in the translation and interpreting program with an innovative teaching method. The aims of this project are to build a dynamic, virtual model of translation briefs and to familiarize students with real-life work environments and tasks.

The research study created a collaborative work environment similar to that of the real professional translation process. Data from the post-course surveys administered indicate the suitability of this method for teaching students about teleworking from a practical standpoint.

Translation students are expected to learn how to work in teams; teamwork variables included in our study reveal that students are satisfied with the PATT experiment and that their overall attitude toward teamwork has improved.

It is evident that the completion of translation briefs requires some computer knowledge. This was measured by surveys administered before and after the study. The results of both surveys show a slight increase in student confidence in computer use. This increase may be due to their continuous practice with computer tools during the project. This study also focuses on students' perception of their translation skills. Although this is not the main topic of the study, it is notable that students who participated in PATT seem to report increased confidence in their ability to complete different tasks in the translation process.

Relationships among different groups of variables show a positive correlation between the number of translation briefs managed and general satisfaction with teamworking. Moreover, before participating in the project, younger students showed a higher disposition toward teamworking. By contrast, students in their later years of study possessed greater knowledge of computer and teleworking tools. After the experiment, students were better able to distinguish between teamworking, computer knowledge, and teleworking. Perhaps their perception had improved with the experiment since they had learned to dissociate the general work method from the tools.

Responses to the post-course questionnaire indicated a high level of satisfaction among students, both with the project and with the collaborative work platform. It is therefore unsurprising that students are willing to recommend this didactic model to other students. Finally, the oldest students (and those enrolled in the final years of study) registered a higher level of experience using the platform, while students from lower courses report a more positive opinion of the project.

The data obtained from this study suggest that using a collaborative work platform in translation courses is beneficial, enabling students to gain confidence and feel satisfied with their work. It would be interesting to compare the results presented here with those obtained by other studies measuring increases in student satisfaction and competence after completing translation briefs using traditional methods, without the virtual communication made possible by a collaborative work platform. To conclude, the tools and the evaluation method used in this project may be effectively applied in other fields of higher education.

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KEY TERMS

BSCW: A shared workspace system. A Web-based environment for collaborative document editing and other shared work

Collaborative Software: Software that allows people to work together on the same documents and projects over local and remote networks.

Collaborative Workspaces: A collaborative workspace or shared workspace is an inter-connected environment in which all the participants in dispersed locations can access and interact with each other just as inside a single entity.

Computer Supported Cooperative Work (CSCW): The study of how people work together using computer technology.

Networks in Learning: The use of Information and communications technology (such as the Internet) to establish and maintain connections with people and information to support each other's learning, hence a networked learning.

Professional Approach to Learning: Familiarizing students with a virtual environment helps them to acquire the professional skills that will be demanded in the future, since the current information society demands the automation of most tasks, the use of teleworking and, on many occasions, distance team working.

Teamwork: Cooperative effort by the members of a group or team to achieve a common goal.

Teleworking: Using information and communications technologies to perform work away from the traditional worksite typically used by the organization