



## TEAMWORK IN VIRTUAL ENVIRONMENTS - EFFECTIVE APPROACH IN LANGUAGE LEARNING

**Diana Rumpite, Atis Kapenieks, Bruno Zuga**

Riga Technical University, Latvia  
1 Kalku St., Riga, LV-1658, Latvia  
[dianar@rsf.rtu.lv](mailto:dianar@rsf.rtu.lv)

Riga Technical University (Latvia) meets the challenges offered by the new social, economic and cultural situation trying to adapt innovative and productive educational practices in the development and delivery of courses. This task is closely connected with implementing more flexible education in terms of

- time and location (relating to where students can carry out the learning activities associated with a course)
- types of interactions
- forms of communication within a course.

Academics from three university departments proposed the idea for a new course development project - interactive multimedia CD-ROM "Technical Communication". The idea was tested by a team of 72 students together with 2 university lecturers and IT experts. The new multimedia CD-ROM had to be completed in 4 months.

The literary source of the project was the book in English "Technical Communication" by Lolita Rodman from Canada with more than 400 pages which had to be studied, adapted, translated into Latvian and developed into a multimedia CD-ROM. Thus the project was supposed to include both academic and authentic professional tasks and students got an academic credit for it. 72 Computer Science students were having a university course in Project Development and at the same time were acting as developers of a multimedia CD-ROM in Latvian. They were active individual learners and group participants. With such a large team and a complicated task the project could be accomplished only in the Web based shared workspace. The two lecturers - one in English and the other in information technologies - were rather course facilitators and collaborators than direct instructors. Authentic tasks to be accomplished or problems to be solved that had a personal, academic and social relevance replaced direct instruction.

The range between the lower limit of what the learner knows and the upper limit of what the learner has the potential of accomplishing is termed by Vygotsky as the zone of proximal development. We tried to complete the above task near the upper end of the students' zone of proximal development and then systematically withdraw the support as the students moved to higher levels of confidence.

The innovations undertaken involved an element of risk-taking for all the participants of the project because of the size of the group, co-ordination and complexity of the task as well as lack of teamwork experience in a virtual environment. That is why thoughtful planning was very essential for the roles, duties and course scheduling including time management. There was a very exact co-ordination of activities within the whole group and 6 smaller groups in attaining the short and long - term goals. The project could occur within a well-planned and co-ordinated implementation strategy.



It was important to make the project relevant and useful also by integrating the improvement of students' proficiency in English and literary Latvian language, as well as increasing expertise in information technologies.

Thus the basic objectives of the project were as follows:

- to create a multimedia CD-ROM in Latvian which was an educational innovation within the university
- to improve English language proficiency
- to master collaborative and teamwork management via IT networking. The project provided a new type of collaboration where both the way of interacting in the virtual environment and the end product were equally relevant.
- to develop self-directed learning skills in a virtual environment. From the recognition that education is a continuous, life-long process special emphasis was placed on helping students to develop self-directed skills and personal leadership abilities using computer settings. The project implied a high level of individualisation and self-direction as increasingly important competency by implementing a learner-focused educational strategy.

The key elements attained by the students involved were:

1. in-depth understanding of "Technical Communication" topics in English.

The book serves as a rich source of information about professional writing comprising such activities as technical (technical specifications, explanations how to solve technical problems), business (persuasive documents, including letters, memoranda, resumes, formal reports, proposals, instructions), administrative (reports, etc.), educational (user manuals, pamphlets for the public, handbooks for new employees), academic (articles for professional or academic publications, research reports, etc.).

2. adaption and translation of the English text into Latvian

3. making decisions regarding the best choice of linguistic and semantic expression in Latvian

4. making decisions regarding the effective applications of multimedia solutions for the course content presentation.

The course was worked out using a Lotus Notes based virtual platform which has been specially designed at Riga Technical University Distance Education Study Centre to support project management and the course development process. It has proved to be a very flexible and efficient tool in developing different projects in a virtual environment and can ensure a successful collaborative teamwork of geographically dispersed developers (in our case in Latvia and Canada) acting asynchronously by distance in the most convenient way. The new tool allows course developers to contribute multimedia course materials in the Internet-based Course Development Forum.

The students generated the pages of the course in the computer-mediated environment using the priorities of the Virtual Forum. Each student contributed individual sections to the final, collaboratively designed course. Hence the resulting project was totally shared. The students contributed the content of the course pages in terms of the text in English and Latvian as well as pictures, audio and video in this Internet-based Course Development Forum.

An accurate record of all versions of the course materials was maintained in the Forum as they developed. A very significant point is that transparency on the work done among the members of the development team could be achieved.

While working on the project the students developed specifically reading and writing skills by discussion, translation, editing, revising in the new environment. These skills formed a part of the general reading comprehension strategy needed for successful adaptation and translation of the original English text. Thus the Virtual Forum included a lot of practice for using both English and Latvian.

The virtual platform provided efficient tools for navigating through the course materials.

There was also an easy access to 5 Workbooks, Library, Front Page, etc. The Front Page listed the latest entries in the various areas of the online Forum such as Discussion, Workbook 1 - 5, Library, Glossary, FAQ (Frequently Asked Questions and answers), Participant. The entries in each Workbook could be sorted by chapter, by date, by author, all by date, all by author.



As it was mentioned above the interactive environments can be "fixed" or "open" with respect to time and place. Another possibility to interact was a Virtual Asynchronous Discussion Forum. This Forum helped to be responsive and secured the collaboration among the students as well as the faculty staff. It enabled the course facilitators and team members to make decisions in a structured and organised way. The discussion was going on about the best linguistic and semantic expression, translation of specific terms, organisational issues, decision-making, etc. The students were actively taking part in the discussion forum and submitted a large amount of messages, including responses to the entries.

The course was completed using a multimedia authoring tool, Authorware.

### Conclusions

1. Clear understanding of the meaningful final product created a high level of motivation and responsibility. The student feedback comments emphasised that the group interaction was intellectually stimulating and that they produced higher quality work online. A major factor supporting the participation noted by students was also the increased access opportunities offered by asynchronous, place-independent virtual environment.
2. The need for in-depth understanding of the English text opened up a new perspective for better comprehension of both English and the literary Latvian language.
3. The virtual environment created a new type of interactivity and collaboration among students as well as students and the academic staff. Joint project work in a virtual environment encouraged autonomy, creative strategic initiative and skills in co-operation, time-management, mutual and self-evaluation and reflection.
4. The research done at Riga Technical University Distance Education Study Centre has developed suggestions as to the new role of the faculty and students in a long term creative collaboration in virtual settings, as well as provided the basis and requirements for successful development of projects in different languages online.