When Old Languages Go Online:
Latinum electronicum, a Latin Course on the Web

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Abstract: Latinum electronicum is a project of the Swiss Virtual Campus. It aims at creating a web-based course to teach basic Latin to university beginners. The course will be available in German, French and Italian; it will be integrated into the existing Latin courses at the Swiss universities in alternation with courses taught in class. Latinum electronicum wants to turn the interactive and multimedia qualities of the internet to the best advantage. The learning platform adopted is WebCT. The whole course is divided into 23 lessons and some complementary modules. The exercises are the added value of Latinum electronicum: the course offers, in fact, more than 25 different kinds of exercises, developed with Macromedia Flash. Two different evaluation phases have been conducted at the Universities of Basle, Fribourg and Neuchâtel; the main results are presented in this paper.

1. Introduction: the Project

Latinum electronicum (www.unibas.ch/latinum-electronicum) is a project of the Swiss Virtual Campus (SVC, www.virtualcampus.ch), a programme of the Swiss Confederation entitled in 1999 to support new information and communication technology in higher education. The principal aim of the SVC is to develop teaching modules for basic and specialized study programmes, which are accessible via internet. Currently, 50 projects are involved in the SVC.

The goal of Latinum electronicum is to create a web-based course to teach basic Latin to university beginners. As a result of the reform of Swiss school-leaving examination in 1995, more and more students enter university without any knowledge of Latin; but, on the university side, Latin remains mandatory for entering such university faculties as history, foreign languages, literature, theology and so on. As a consequence, Latin classes become overcrowded, because on the other side it is not possible to engage more Latin teachers. Latinum electronicum tries to solve this problem and to maintain the quality of these classes by providing a course which can be integrated into the existing Latin courses at the Swiss universities in alternation with courses taught in class. By transferring parts of the course to on-line studies, the number of hours of in-presence classes can be reduced and at the same time be used more effectively, since there remains more room for individual problems and questions.

Latinum electronicum is currently available in three Swiss national languages: German, French and Italian.

The project involves four different Swiss universities:
- University of Basle: is the leading house and provides the coordination of the project and technical lead;
- University of Lugano: provides translation and localization into Italian and technical implementation;
- University of Neuchâtel: provides content development and translation and localization into French;
- University of Zurich: provides content development and translation and localization into German.

The project started in October 2000 and will continue up to June 2004. Currently, the German and French versions are nearly finished and are already in use in different learning scenarios in some Swiss universities (Basle, Neuchâtel and Fribourg); the Italian version is in course of completion. A demo version can be accessed from the website of the project (www.unibas.ch/latinum-electronicum), in the section Kurs/Course/Corso. The final product will be available in June 2004.

2. Technological Tools

The learning platform adopted by Latinum electronicum is WebCT. The decision of adopting an existing platform instead of creating a new, more tailored, one was due to reasons of costs, time and competences of the team.

WebCT was selected after a testing phase led by the URZ Basle (Universitätsrechenzentrum Basel) and the Edutech, a center which provides technical support to the projects of the SVC; in this phase different tools for supporting collaborative learning were compared. WebCT was chosen for reasons of facility of use for both designers and students, of reliability and of diffusion.

Latinum electronicum uses some tools provided by WebCT and integrates them with other technologies. In particular, WebCT is used as a content delivery tool, as a communication tool, and as a tool for students' self-evaluation. Among the communication tools offered by the platform (e-mail, forum, chat and whiteboard), only e-mail and forum have been used, since most of the communication between students and teachers/tutors occurs during in-presence classes. However, sometimes students may need to ask questions about the exercises or technical problems; in these cases such asynchronous communication tools as e-mail and forums may result to be very helpful (Godwin-Jones 2003).

What WebCT has proved to be inadequate for is the training activity for language learners. WebCT, in fact, offers a very limited number of types of exercises, namely multiple choice questions, matching lists, short answers, paragraphs and a mathematical type of exercise, which – obviously! – is of no utility for a Latin course. Thus, in order to be able to develop diversified, motivating and amusing exercises, Macromedia Flash has been adopted; by means of Flash more than 25 different types of exercises have been developed. Furthermore, some grammatical concepts have been explained by means of animations, which have been realized with Flash as well (Burch 2003). Apart from the didactical use, Flash facilitates the maintenance of the courses running at several Swiss universities in a high degree. Instead of distributing the actual content on every university server, we can store the Flash files in just one place. The individual courses only contain references to the data. However, the types of exercises offered by WebCT proved to be useful in order to create self-assessment tests; WebCT, in fact, keeps track of the results of the tests performed by students, which is a useful feature for both students and teachers.

On the side of the students, no particular technologies are required: if necessary, students just have to download and install the last version of the Flash Player and the Acrobat Reader; detailed instructions about it are provided.

3. The Pedagogical Design of the Course

Since Latinum electronicum aims at supporting and integrating Latin classes, it has been conceived to be used in alternation with in-presence lessons. Thus, it is a tool for blended learning, which can replace some class activities, thus reducing the number of class lessons for each student.

The whole course is divided into 23 lessons and some complementary modules. The lessons have been designed to be used linearly, since they are arranged in order of difficulty.

Each lesson provides an introductory page, the explanation of new grammatical concepts, exercises on the new topics, a self-evaluation test, a file containing a Latin text to be translated, and the list of the new words the student has to learn in the lesson. Each lesson is preceded by a table of contents, from which all the single pages of the lesson (grammar, exercises, test, text, PDF files) can be accessed. The navigation inside a single lesson has been conceived as a linear navigation, where explanations of grammatical concepts alternate with exercises. Nonetheless, when the learner is on a grammar page, he can decide to skip the exercises related to that grammar concept and directly jump to the next grammar page. Moreover, associated topics are concatenated by hyperlinks so that a navigation following a special topic is also possible. Each lesson contains from 4 to 10 grammar pages and a number of exercises varying from 10 to about 30.

3.1. The grammar

In each lesson one or more grammatical concepts are introduced. Lessons start with an introduction page, where the objectives of the lesson are stated and any previous knowledge is mentioned, which may be needed in order to be able to understand the new concepts. The actual grammar pages are static html pages. Due to our concept of blended learning, they are intended for the students' revision at home. In order to facilitate the screen reading, the scrolling of the page is reduced to a minimum, and each grammar page corresponds more or less to one computer screen.

When the specific grammatical content requires it, i.e. when a more complex concept is presented, this is introduced not on a static page, but by a short Flash animation; it is, for instance, the case of such a concept as the *ablativus absolutus* (Burch & Hiltscher 2002, 2003). In these cases, the animation presents a sentence or a short text, where an example of the new phenomenon is provided; animations are very helpful for the students, for instance because they highlight graphically the morphological analysis of the cases, they represent the temporal relationship between two sentences and they accompany the student step by step in the different phases of the translation of a text. (Fig. 1)
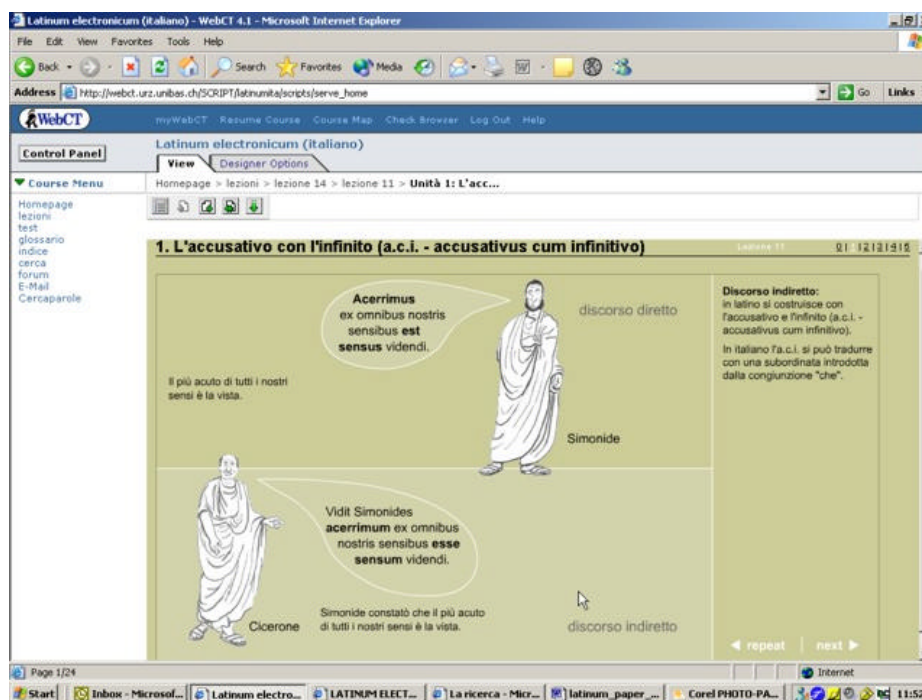

Figure 1. A Flash animation introduces the new grammatical concept.

All the grammatical explanations are also available in a PDF file, which can be easily downloaded and read offline or printed. This way, a student is neither obliged to read everything online nor on the screen, thus avoiding high connection costs and the trouble of reading on the screen.

Each lesson offers two other PDF files which provide the meaning of the new words the student has to learn in the lesson, in the form of an alphabetical list and of printable flashcards respectively.

3.2. The exercises

Every grammar page is followed by a series of exercises, which allow the student to verify immediately if he has understood and learned the new argument. The exercises are undoubtedly the very added value of the Latinum electronicum, which strongly relies on such activities as the repetition of morphological forms of verbs and nouns, the syntactical analysis of sentences as well as the translation of sentences and short texts (Burch & Hiltscher 2003).

The developed exercises exploit the main features of eLearning, such as interactivity and delivery of multimedia content. Latinum electronicum offers more than 25 different kinds of exercises: the exercises of the first lessons are mainly "word-oriented", since these lessons introduce the morphology of different word categories; the exercises of the last lessons are mainly "sentence/text-oriented", since the last lessons deal mainly with syntactic notions and translation-related issues. Some exercises are playful, as e.g. the Memory game, where all the words must be located, memorized and associated in pairs, the Outsider, and the Catching words; others resemble more traditional ways of learning a language. In this section we will present some exercises in more detail.

– The Outsider

In this exe rcise the learner must recognize in every line the word that does not belong to the series; the learner must drag the word into the mouth of the mask. If the student chooses the right word, the mask swallows it and generates a feedback explaining why the selected word is the outsider in the line (e.g.: "this is the only word that is not in genitive"). (Fig. 2)
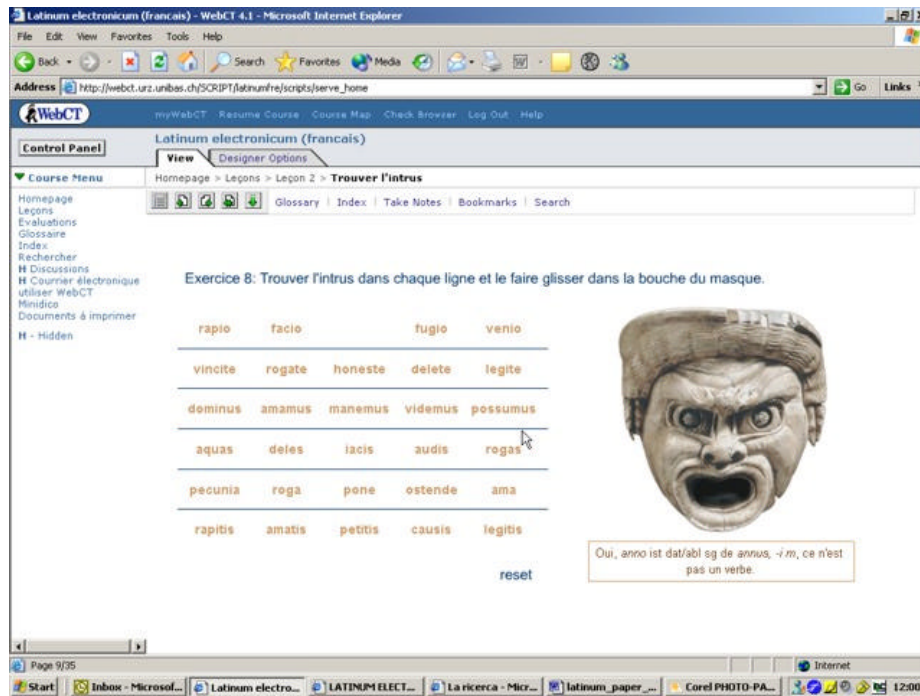

Figure 2. The Outsider exercise.

– Catching Words

In this sort of "Tetris" game the student must move the vessels horizontally in order to get the falling word in the right one; if he can do it, he gets two points; if he chooses the wrong vessel or does not catch the word, he looses one point. (Fig. 3)
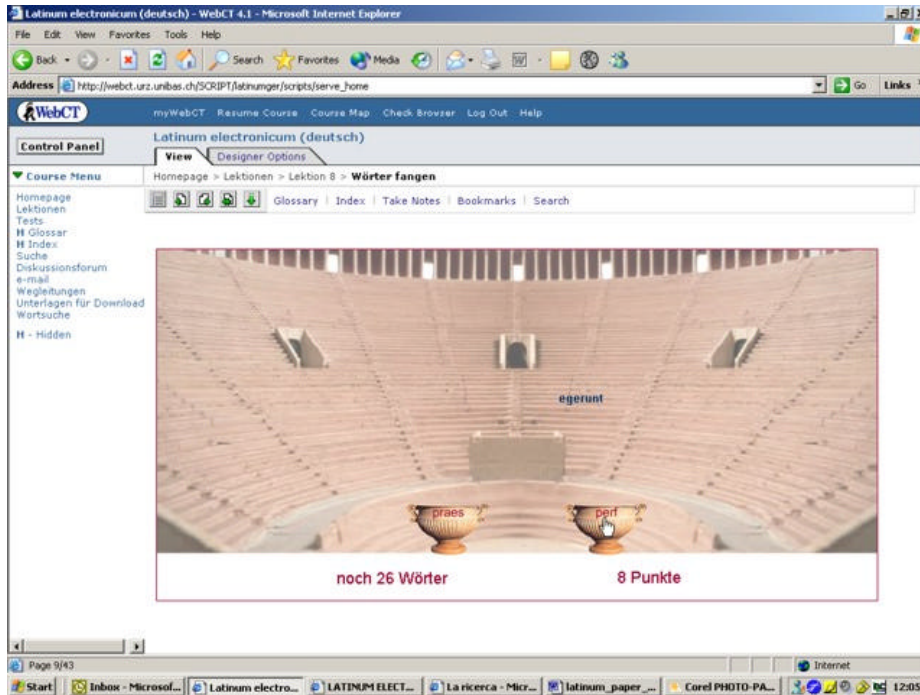
Figure 3. The Catching Words exercise.

- Intersecting circles

In this exercise the learner must drag the words in the right circle or section of a circle, paying attention to the intersections. This exercise is particularly useful to train the learner to recognize the forms of verbs or nouns which have more than one meaning. (Fig. 4)
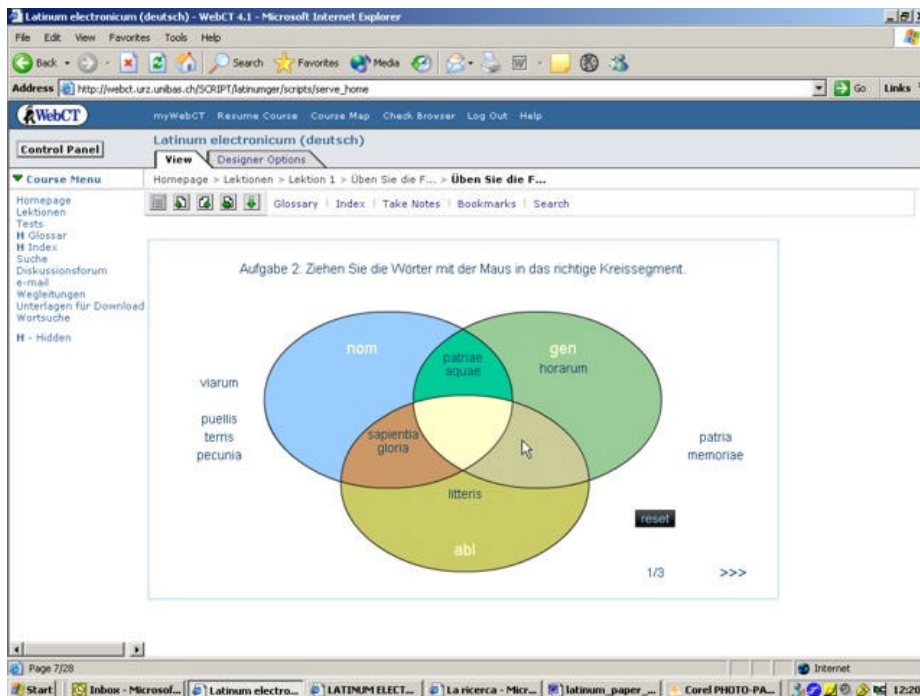

Figure 4. The intersecting circles exercise.

- Sentence analysis through colors

To facilitate the analysis of Latin sentences, predefined colors are used for each case. In this exercise the learner has to assign the right color to every noun, pronoun or adjective in the sentence depending on its case. This way

the student has a visual help to recognize the case of the words and their function in the sentence. Once the analysis is complete, the student is required to translate the sentence. (Fig. 5)
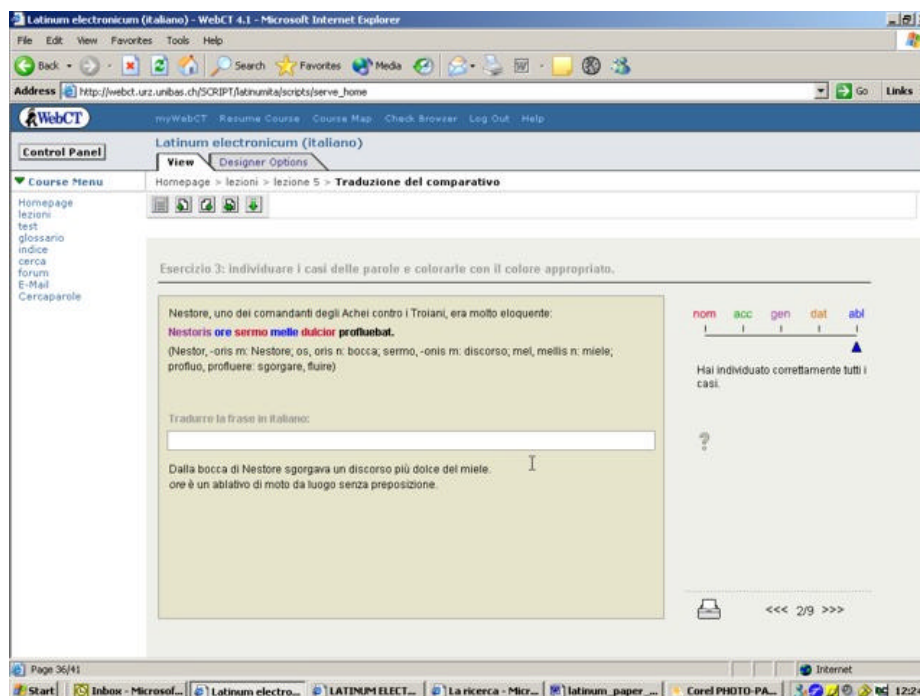

Figure 5. The syntactic analysis of a sentence through colors.

- Analysis and translation of sentences
One of the main difficulties in learning Latin is to identify the syntactical structure of a clause and to find an adequate translation. In this exercise a Latin sentence is provided which the student must translate. S/he is led step by step in the translation by means of questions (e. g. short answer, multiple choice, Y/N) that help him in analyzing the sentence before translating it; an "ideal" translation of the sentence is then provided, which the student can let appear at the end of the exercise and compare to her/his own. This exercise offers a great flexibility because six different question types can be combined unrestrictedly.

3.3. The test
At the end of each lesson, a self-evaluation test is provided. For this the WebCT quiz-tool is used. The test allows the student to verify what he has learned and understood. The tests comprehend only a limited number of kinds of exercises: multiple choice questions (allowing one or more answers), short answers, matching pairs. WebCT keeps track of the results of each test submitted by each student, thus allowing both students and teachers/tutors to monitor the results.

3.4. The text
A PDF file is associated to each lesson (except the first one); the file presents a Latin text that contains the new grammatical concepts introduced in the lesson. Students can print the file and work on their own to analyze and translate the text; the analysis and translation will then be corrected and discussed together with the teacher in class.

3.5. Other tools
Apart from the 23 lessons, a few other modules and tools are available, which present more general concepts:
- the dictionary contains all the words presented in the grammar and in the exercises; a search function on the whole dictionary is available;
- pronunciation: the sentences in the grammar pages, a few texts and the whole dictionary will soon be available as audio files as well, in order to show the correct pronunciation of Latin words;

- translation techniques: two additional animations are being provided in order to offer suggestions on texts' translation; one animation deals with the translation of Latin cases, the other one shows the dissection and translation of a complexLatin sentence with multiple subordinate clauses of different degrees;
- in three modules playful revision exercises are provided concerning the whole morphology of Latin nouns and verbs and the vocabulary (the so-called "verbs-trainer", "nouns-trainer" and "words-trainer");
- the glossary explains the most important terms regarding Latin culture and history;
- word formation: if there is enough time another module is planned which explains the main rules for the formation of Latin words, so that students can learn to derive new words that they didn't previously know.

4. The evaluation: results of the test phases

A first test phase was conducted during the Winter Semester 2002 at the University of Basle with 120 students, 92 female (76.7%), 28 male (23.3%); for the test phase four lessons of Latinum electronicum (lessons 10, 11, 15 and 16) were integrated into the regular Latin classes. At the end of the semester students were asked to evaluate Latinum electronicum by means of a questionnaire. Goal of the evaluation was to modify and improve the online course, which was still in a developing phase, according to the students' needs. The questionnaire was divided into 11 sections: Technical quality of the system, Usability and user friendliness of the system, Layout, Amusement, acceptance and usefulness, Learning process and learning success, Online communication and assistance, Alternating between in-presence classes and eLearning activities, Previous experiences with computer and internet, Computer working place, eLearning infrastructure, Personal data.

The most positive answers were given with regard to the layout and to the technical quality and the user friendliness of the system: almost no problems were discovered about the loading of animations and exercises, the system speed, the installation of required plug-ins, and about login, navigation and orientation. The learning process got good rates as well, as for the structure of the lessons, the organization and the presentation of contents (more than 70%) and the usefulness of exercises and animations (again more than 70%) in particular.

Some negative remarks occurred as well, in part regarding the course itself, but also largely concerning eLearning activities in general. Most students found, in fact, that Latinum electronicum could not replace in-presence classes, but rated it as very useful as a complementary tool. With regard to the course infrastructure, 74.2% of learners would have preferred to work with Latinum electronicum on a CD-Rom rather than online. As for the communication tools, discussion forums and online communications with teachers and tutors were rated as not very useful for the learning process.

A second evaluation by means of a detailed questionnaire was held in three universities in the Winter Semester 2003/04, after the first long-time use of Latinum electronicum in Latin courses: Basle (questionnaires submitted by 49 students out of 70 participants), Fribourg (29 students out of 90), Neuchâtel (10 volunteer students). The following categories were evaluated in all universities: Technical quality, Usability, Design, Acceptance/usefulness, Learning process/learning success, Previous experience with computers, Computer infrastructure at home/at the university. In Basle and Fribourg the use of online communication tools (e-mail, forum) was evaluated as well; in Fribourg and Neuchâtel, where a blended learning concept is being used, the balance between face-to-face teaching and online activities was also evaluated.

In the categories Technical quality, Usability and Design the results were fully positive in all the universities. Also the grammatical explanations were considered as excellent, the animations as very helpful and most of the exercises as useful, although in Fribourg and Neuchâtel most of the students considered the translation exercises as too difficult. Also in this phase, students would have preferred to work with a CD-Rom.

In Neuchâtel, where a pilot class of 10 volunteers used Latinum electronicum, the motivation of the students to work with it was very high; the course was considered as very useful and the students felt they had learned a great deal thanks to Latinum electronicum. The balance between lessons taught in class and online phases was considered as good. In Fribourg, where Latinum electronicum is integrated into the regular course, the motivation of the students was lower and the feedback was not as positive as in Neuchâtel; it must be considered, though, that the use of Latinum electronicum was compulsory for the students. The answers in the categories Acceptance and Learning process were often around 50%:50% positive or negative. The main reason was probably that most students considered the online phases between classes too short to thoroughly study the material, and that they had to study the grammar on their own.

In Neuchâtel and Fribourg the possibility to study on one's own and the high flexibility allowed by Latinum electronicum in organizing students' time were appreciated very much. Yet, it was also emphasised that a teacher is indispensable, and that difficult subjects must be treated in class.

In Basle there was a special situation: about 70 students out of 180 worked with Latinum electronicum to revise and exercise the grammar. But in the Winter Semester 2003/04 the lessons taught in class were not yet in harmony with the structure of Latinum electronicum, as it had been decided to use the traditional manual, which has a completely different structure. This was the main negative point mentioned by the students, who found

that the parallel use of two incompatible courses was difficult (different vocabulary, constant need to search the whole online course for subjects treated in class, etc.). Nevertheless, in most other categories, such as Motivation, Acceptance and Learning process, their answers were quite positive.

In Fribourg and in Basle the students did not use the online communication means very often, but preferred to ask their questions in class.

Finally, it is worth mentioning here that in July 2003 Latinum electronicum has been awarded two prizes at the Innovationspreis (Innovation Prize) E-Learning of the University of Basle: among 25 competing projects, Latinum electronicum was given the prizes in the categories of didactics (for the innovative and motivating structure of the course) and design (for the usability and the layout of the course).

5. Current use and conclusions

Latinum electronicum is currently in use in a blended learning scenario at the Universities of Neuchâtel (pilot-group of 10 students) and Fribourg (regular course, 90 students). In Basle the course is used at the moment as a supplement to the regular course: about 70 students out of 180 used it in the Winter Semester 2003/04 for revision and training; a blended learning concept is planned for the Winter Semester 2004/05. The course is also available for free to the students of all the Swiss universities.

As the evaluation made by the students has clearly pointed out, Latinum electronicum is not to be thought of as a stand-alone product, but rather as an integrative tool, which can be very useful if adopted to support in-presence lessons, in a real blended learning process. According to students' suggestions, Latinum electronicum could be used in alternation with in-presence lessons as follows: new grammar concepts are first introduced in class; then students learn by themselves and do exercises with Latinum electronicum; finally, concepts are re-discussed and possible questions are answered in a class lesson.

The great variety of exercises proposed by Latinum electronicum and their interactive and playful features make Latinum electronicum a tool that lends itself very well to revision and training activities. Through the adopted didactic concept the alternation between in-presence lessons and self-learning becomes effective and efficient: both parts of the learning process undertake specific and complementary tasks, and their connection contributes to creating an optimum learning experience. This way, Latinum electronicum helps to maintain the quality of the overcrowded Latin courses at Swiss universities.

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