A New Moodle-Based Learning Environment for Italian as a Second Language

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Abstract

The contribution illustrates the design phases of a new learning environment (based on MOODLE) for the delivery of online Italian language courses ICoN, with a particular reference to the virtual classroom study mode, and therefore to the integration of educational contents and spaces of interaction, in the context of the construction of a social space of learning.
The following plugins are described: the custom graphic theme and the customized class report.
The new MOODLE environment has been specifically designed for language learning, and responds to the following educational needs: encouraging horizontal and vertical interaction between students and tutors; promoting cooperative learning; supporting the "learning by doing" approach thanks to an essential interface that allows students to orientate in the language course, and navigate the contents in a friendly way; reconciling the flexibility and autonomy of the study through digital materials (in e-learning, blended learning or self-learning) with the guarantee of achieving clear and well-structured teaching objectives; providing both the student and the teacher with intuitive tools to monitor the progress of activities and progress in the learning phases.

Keywords: *Italian as a Second Language, e-learning, virtual classroom, MOODLE;*

1. ICoN Italian Language Courses: the structure, the teaching approach and the numbers

ICoN Italian language courses are online courses based on the philosophy of *learning by doing*: they have a standard structure and are divided into modules, units and sessions, which contain activities with an automatic correction system and grammar and lexical study files. The student learns the Italian language by carrying out the activities, and by checking an immediate feedback on the correct answers, the wrong answers and the solutions.

Feedback is not used for evaluation purposes, but simply as a learning tool: the student can repeat the activities as often as desired. Through the performance of the activities, improves the acquisition of the Italian by formulating and verifying his/her own hypothesis on lexicon, structures and uses of language.

The activities with automatic correction (about 1000 for each of the levels of the Common European Framework of Reference for Languages: A1, A2, B1, B2, C1) constitute the basic educational material of the courses.

The student engages in about twenty types of exercises, specifically developed for language learning: in addition to the classic cloze and pairings, there are reorders, grid and table fillings and working exercises on the written text, in which the student is called to select, manipulate, classify elements of the text itself.

The courses have been designed to be used in e-learning mode (in virtual classroom with tutoring or self-learning), but can also be used in blended learning paths, or as a digital resource for Italian teachers.

In the virtual classroom mode with tutoring, students are enrolled in a virtual classroom (generally composed of 15-18 students). In the class forum, tutors propose, even with the help of Web 2.0 tools, written and oral production activities with open correction, which have a dual objective: on the one hand, to complete the activities that are corrected automatically with production activities; on the other hand, to foster, through the activities themselves, building relationships between students and mutual knowledge.

The class forum is a real learning space, where communication takes place exclusively in Italian from beginner levels, according to an immersive approach.

In self-learning mode, the student is not enrolled in a virtual classroom, but performs only self-correcting activities in total autonomy, without interacting with other students and with the tutor.

2. The learning environment and the educational needs

Since 2001, thousands of students from all over the world have learned Italian with the online Italian courses ICoN, both privately and as part of projects funded by State-bodies and institutions (for example, the Brazilian Government, or the Autonomous Province of Trento).

Over the years ICoN online Italian courses have undergone various transformations in the format and learning environment. From 2009 to 2016 they were provided through an open-source ADA platform, customized for ICoN, while starting from 2017 they are delivered on MOODLE (version 3.1), after a migration of contents from the previously used educational platform.

We have developed a personalized learning environment for the needs of ICoN courses on MOODLE, which can be summarized as follows:

- to enhance the orientation of the student through a friendly navigation of the activities with automatic correction;
- represent in a clear and transparent manner the progress of the student in carrying out the activities with automatic correction;
- in the tutoring mode, to propose to the student an environment that reproduces a real virtual classroom for formal learning of the Italian language, and which promotes communication within the class forum;
- to provide the virtual classroom teacher with an agile and fast tool to get an immediate glance on the progress of the class, and to deepen the "critical" cases through the MOODLE monitoring and tracking tools.

3. Development of new MOODLE plugins

In order to make the MOODLE CMS suitable to ICoN courses format and educational needs of language learners, MOODLE has been extended with the following plugins:

- ICoN customized graphic theme;
- New ICoN customized class report.

3.1 ICoN customized graphic theme

ICoN Italian language courses are characterized by the great abundance of teaching materials: each course level contains about 1000 activities with automatic correction, which were mapped on the activity Quiz of MOODLE (according to a correspondence 1 Quiz - 1 session), enriched with a new set of question types not provided in the native version of MOODLE. About 100 study files, integrated through a specific menu, add to all that.

Therefore the graphic theme has been developed to respond effectively to the needs to create a welcoming and friendly learning environment, which allows the student to orientate himself within this substantial quantity of teaching materials, and to set up the study of the language, in an autonomous and flexible way, but without losing sight of the learning objectives and the general sense of the educational path.

To meet this need, the course map has been designed; the map presents the contents of the course for subsequent levels of study (modules, units and sessions), which can be expanded or collapsed.

The map reproduces the sections of the course, and gives information (aggregated or detailed, depending on the level of depth in the navigation of the hierarchy) on the progress of the student during the course.
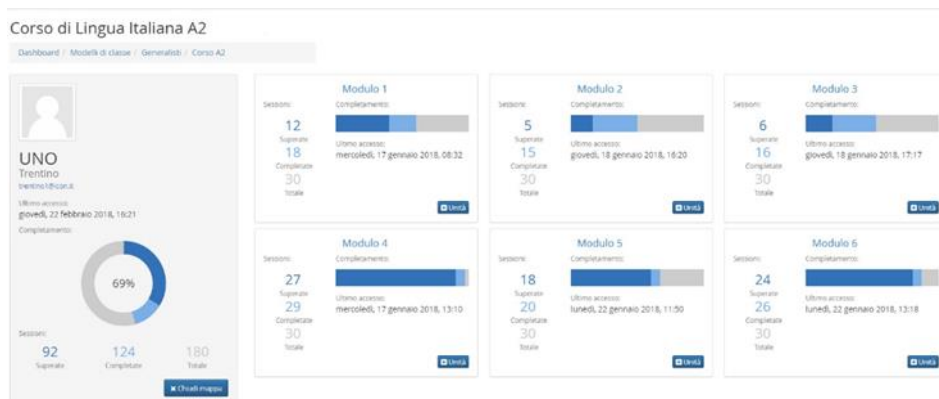

Fig. 1 Course map: student-side

The progress of the course is represented by the total number of sessions passed and completed: the sessions completed are the Quizzes actually delivered via the keys "Finish" and "Attempt all activities" ("Delivery" and "Send all and end" in the native terminology of MOODLE); the sessions passed are the Quizzes that have a score above 0.1. In ICoN language courses, the Quizzes do not represent a moment of evaluation, but rather a tool through which students learn Italian, thanks to the automatic correction and to the subsequent reflection on correct and wrong answers.

0.1 sufficiency is set by default to ICoN language courses, but of course can be changed based on the specific needs of the educational path.

The ICoN graphic theme includes, among other things, the redesign of the MOODLE native navigation menus, with the aim of making the student concentrate on the central elements of the course.

The single multi-function menu of MOODLE has been divided into its functional macro-components:

1. **Navigation**: links for navigation between courses and categories;
2. **Administration**: link for the administration of MOODLE;
3. **Index of the course**: navigation link during the course (integrated with the MOODLE tracking system, so as to show the course completion data);
4. **Index of the study cards**: accessory links for access to ICoN study cards of each course (not available in the MOODLE native menu).

The new menus are accessible to the user through a system of lateral navigation bars, with the following differentiation according to the role:

- "Student" role: the "Navigation" menu, the "Index" menu and the "Home" key have been provided. In addition, the tutoring student displays the "Class" section (expandable and collapsed), with the profile of the classmates and the link to the class forum;
- "Tutor" role: displays the "Administration" menu in addition to the "Navigation", "Index" menus and the "Home" button.

Both the student and the tutor have access to a "Start from first steps" section, containing short video tutorials on the course structure, contents and navigation, and main functionalities. This section, at the first access, is well highlighted in the Home; it is then always reachable and can be consulted via the Index of the course.

The "Index" menu, always reachable from any point along with the "Home" key (which refers to the main page of the course) deserves a deepening.
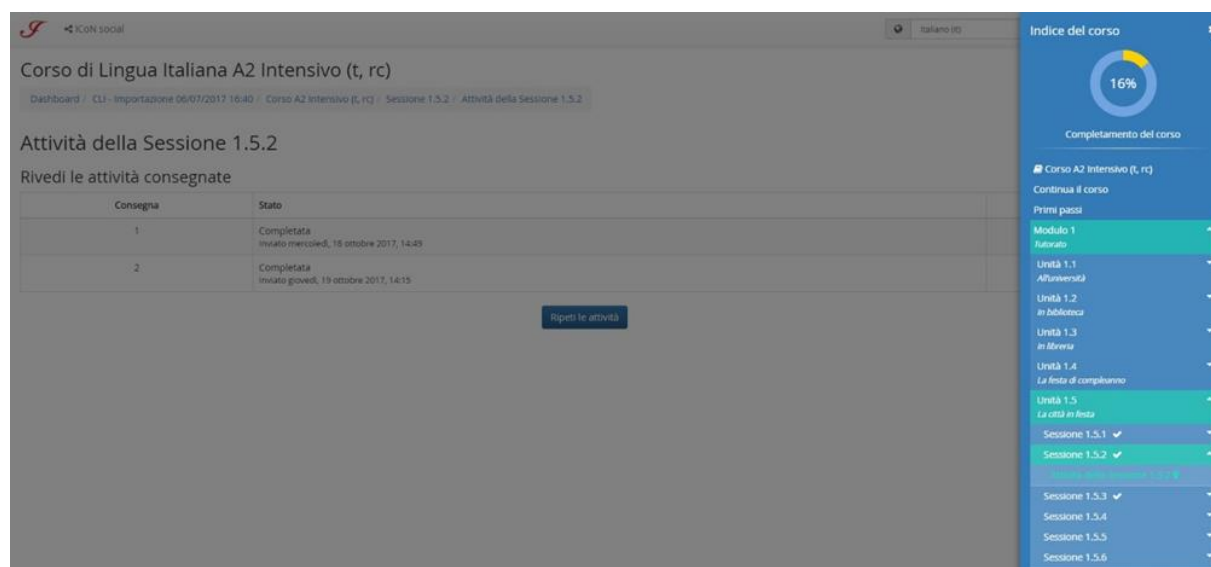

Fig. 2 Index of the Course

The Index reproduces the sections of the course, hierarchically structured in modules, units, sessions, and changes dynamically based on two elements:

- where the student is located ("positioning" icon);
- which sessions have been completed ("check" icon).

As shown in the Fig. 2, the initial part of the Index reproduces the total percentage of completion of the course.

As well as the other elements of the course, the Index was also designed to facilitate the student's orientation within the course and to represent the student's progress in a friendly manner in carrying out the activities.

3.2 ICoN class report

The "ICoN Class Report" plugin, a tool accessible only to the tutor starting from the "Administration" menu, has been designed to allow the tutor to have a fairly immediate glance on the progress of the class (both in tutorship and self-learning), to understand quickly enough which students work on the platform and have entered the rhythm of the course, and which instead present critical issues that need to be explored through the MOODLE monitoring and tracking tools ("Completion of activities", "Participation in course" and the" Summary Report "and" Complete Report "of the individual student profile).

So, to build the ICoN class report, we have selected this information for each student:
-   Number of sessions completed and passed;
-   Last access to the course;
-   Completion of the course, represented as a completion bar with two colors indicating the completed sessions and the passed sessions.

For each student, it is possible to go down in detail and visualize the same information for the different contents of the course, organized hierarchically in a similar way to the course map.

The map collects and processes the tracking data related to the development of the sessions (Quizzes), which are displayed both aggregated and grouped according to the various levels of the course.

Thanks to the ICoN class report, the tutor can easily identify which students are at risk of "drop out", which activities are regularly carried out and which ones present critical issues that require additional support (explanations, additional indications given either in the forum or via the private message box).

It is possible to access the pages of the Italian course both from the ICoN class report (accessible only to the tutor) and from the course map (accessible from the home of both the student and the tutor). These pages are:
-   Module page
-   Unit page
-   Session page

From the session page, the student accesses the activities, (the actual Quiz), consisting of cloze, pairings, fillings of grids and tables, and other types etc., displays the correction of each activity with the solution in case of wrong answer, sends the session to the system and repeats them if necessary.

All attempts are recorded on the session page according to the MOODLE Quiz's native mechanism, so the student can check everything he has done, compare, learn Italian in total autonomy.

4. Conclusions and prospects for development

In this paper we have summarized the development elements of the interface of the new ICoN Italian language courses on MOODLE.

The native interface has been strongly modified, to customize the learning environment based on the specific needs of those students who decide to learn Italian online with a flexible program but still traced and clearly identifiable in all its parts.

A further development of the plugins described above is planned, in particular:
-   Creation of a new format for the course;
-   Creation of new types of applications for the MOODLE Quiz;
-   Update of the ICoN class report, with the introduction of tools to filter, organize and query the main tracking data.

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