



Personalising Language Learning Through Technology

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Abstract

In the context of web-based education, technology can offer valuable opportunities to design flexible learning environments, which allow to tailor the learning experience to a larger variety of students with different needs and characteristics. The objective of this paper is to explore various adaptive strategies using Moodle, providing examples based on our experience in creating an Italian online language course. Firstly, the tools presented can offer students individualised learning resources, with the aim to enhance their engagement and foster their learning outcomes. Secondly, teachers can be able to discern valuable information about students that they may further employ to their benefit. With this article, we aim to provide insight regarding the dynamics of online learning and the potential of adaptive strategies in language education, outlining future developments concerning their application.

Keywords: Adaptive learning, Online Italian language course, Moodle

1. Introduction

Research and ways to fully exploit the potential of students has always been a crucial point of reflections on education. Currently, we are experiencing a lot of interest in the use of educational technologies to support the teacher in the construction of reticular, flexible and collaborative language learning paths. However, in classic distance education environments still lingers a traditional model which provides a standard curriculum to all students that may present several limitations [1]. Indeed, during his/her path, the student may have to face critical situations due to the loss of motivation or difficulties in particular topics. This can leave slower learners behind, leading to frustration, and faster learners may become bored and eventually disengaged. At the same time, the lack of real contact prevents teachers and tutors from constantly identifying phenomena such as the loss of attention, or to predict critical factors that could hinder the process of formation [2], [3].

In this context, the support of educational technologies may be a valuable trigger, providing information on what really happens in the learning processes and offering teachers detailed insights on possible ways of intervening to make improvements, in order to understand and optimize both learning and the environments in which it takes place [4].

The objective of this study is therefore to address the issue of personalised language learning (§2), presenting the potential of some tools available on Moodle Learning Management System (§3) and describing the use of these tools in our course (§4). Finally, we will outline possible lines of intervention in order to improve the effectiveness of online language courses.

2. Personalisation in the context of language learning

The centrality of the learners and the consequent awareness of the necessity to adopt a teaching method that increasingly takes into account their individual characteristics is probably one of the greatest pushes that led to a personalized language learning approach. A key aspect in this context are the students' learning styles, which represent the set of schemes and processes that allow them to acquire and elaborate information during the cognitive process, along with the psychological and socio-affective aspects that affects the personal approach to language learning [5]. Following Gardner's theory of multiple intelligences [6], each person perceives the world in a different way for cultural and personal reasons, giving priority to different intelligences as he/she processes an information. In this perspective, providing diversified didactic routes can allow all pupils to develop knowledge at their own pace as their needs and learning styles are taken into account. The recent developments in learning technologies have significantly facilitated the personalisation of learning: didactic contents are available anytime and anywhere whilst learners can choose the way of learning best suitable to their own needs, developing autonomy in handling incoming information. Furthermore, technology offers the opportunity to practice all abilities i.e. reading, listening, writing and oral, both in self pace and in interacting with peers to share and deepen knowledge, consequently enhancing communicative, intercultural and pragmatic skills.

In order to provide a satisfactory online learning experience, important aspects to be considered are the quality and variety of contents, that should keep students engaged from the beginning to the end



of the course. Equally important is the Learning Management System (LMS) exploited to develop the course in which the students will interact. In the section below we will describe the tools which we found pertinent in order to personalise language learning through the Moodle platform.

3. Adaptive learning in the Moodle platform

As we stated in the previous paragraph, understanding students' unique needs and ways of learning is essential in order to provide them with appropriate support and guarantee learning success (§2). Moodle offers several ways to follow students' progress [7] and Reports can be a valuable resource to gather important information about their learning experience. Log Reports allow tutors to track every action performed by the learners, filtered by participants, days, or activities; participation Reports show who has been taking part in specific course activities; activity Reports allow both teachers and learners to keep track of their advancement throughout the learning path, marking with a tick box the tasks that have been completed by the participants. By consulting Reports, teachers can identify students who are not accessing the course regularly, failing quizzes, not participating in the forums or even spending too much time in fulfilling a certain task. Tutors, who in an asynchronous e-learning context act as learning facilitators, can then carry out appropriate actions, for example get in touch with the students on both a collective and individual level, provide supporting materials to the learners that necessitate additional help, re-schedule deadlines, stimulate discussions.

For what concerns the diversification of contents, the Lesson activity provide the opportunity to build alternative paths with dynamic contents adaptable to students' needs. Learners can freely choose among the contents predisposed by the teacher, according with their own preference. Each one of these paths is made up of a series of information pages and question pages, which contain different types of exercises, for example true or false, multiple choice, short answer, essay. The students' progress is established by the answers provided in a question page: a correct answer may direct them to the next content or mark the lesson completed, whereas a wrong answer might lead to additional supportive material or to the beginning of the lesson.

The Quiz activity is a powerful tool for students' evaluation, but it can also be employed to deliver educational material (§4). A single Quiz may contain different types of questions (cloze activities, multiple choice, matching exercises, and many more). When creating a Quiz, teachers can pre-set some feedback messages that the student receives either after completing every single question or at the end of the entire Quiz. The feedback messages may vary depending on the results attained by the learner. For example, if the grade achieved is below the sufficiency level, the feedback may include in depth study or a link that directs learner to a section of the course containing extra learning material.

Finally, another way of personalising the learning experience is restricting the access to a certain activity depending on the results of a previous task. For instance, a low grade received in a Quiz or an insufficient number of posts in a Forum discussion might prevent the learner to move on to the next section of the course. In this case, the platform displays a personalised message explaining the reasons why the following activities are restricted and requesting the student to complete the required tasks. This strategy allows students to learn at their own pace, making sure that they can advance through the learning path only when they are ready to tackle more complex topics

4. Adaptive strategies in our online B1 Italian course

The University for Foreigners of Perugia is developing a B1 Italian online language course on the Moodle University platform. It addresses students of different ages, nationality, cultural and educational background and it will be delivered in full asynchronous mode.

With the aim of diversifying the learning experience and provide adequate support to each student, the following adaptive strategies have been employed.

The Lesson activity is used to create alternative learning paths focused on the socio-pragmatic competence. The aim of these lessons is to develop the ability to understand and perform speech acts in Italian in a contextually appropriate way. In each unit students can choose different types of contents or different topics to explore. Each one of these paths revolves around a different social context and involves the presentation of videos, written texts and audio files altogether, along with a series of question pages.

The Quiz activity is employed not only as part of the assessing strategies, but also to deliver teaching material focused on grammar. For each unit of this course we designed inductive learning paths, which guide learners to discover grammar rules autonomously by first noticing the structures appearing in real linguistic examples, then explicitly formulating the rules and finally practicing them



with a sequence of exercises. Each unit of this course also includes a grammar section containing explicit explanations of the rules explored in that unit.

Inductive teaching is currently considered particularly advantageous, as the learner is more active in the learning process rather than being a passive recipient. However, considering the individual cognitive differences of the students, this method might not be suitable for everyone and some learner could benefit more from being initially exposed to the rules and then memorising them through a series of exercises. Students who struggle with inductive teaching can therefore consult the grammar section at any time. Furthermore, if they receive a low score in the first few activities of the Quiz, the feedback displays a link directing the student to the grammar section, which can provide extra help in completing the path through the Quiz.

Finally, the access to each unit is restricted until the learner has fully completed the previous ones and participated at least once in the forum discussions.

5. Conclusions

In this paper, we have presented some insights on personalised language learning and a collection of strategies and initiatives in order to enhance the learning process using the tools powered by Moodle LMS, providing some instances based on our experience in designing our Italian language course. Besides the strategies presented, Machine Learning and Learning Analytics can also be implemented to monitor step by step the methods and dimensions of construction of knowledge with the whole community of learners. These tools provide guidelines and predictive analysis of students' behaviour in the interactive learning environment. Through the measurement, collection, analysis, processing and interpretation of the overall data, it will be possible to determine the sustainability and effectiveness of the courses and to make intervention in order to optimize methods and resources, offering growingly newest and suitable opportunities of learning.

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