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Using Moodle in English for Professional Purposes (EPP) Teaching at the University North

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Abstract – **This paper discusses the possibilities of employing the process of the blended learning of professional nglish through the oodle platform. t discusses different theoretical approaches to language learning implemented within the oodle platform and the associated cognitive domains according to Bloom's ta onomy. The paper focuses on e amining the oodle activities within the language learning framewor along with the levels of each activity within the cognitive domain. These activities are implemented at the niversity orth within a wide range of courses covering nglish for rofessional urposes aimed at the engineering education. The paper can serve as a framewor for the possible applications of different oodle elements in the teaching of nglish for rofessional urposes.**

I.   INTRODUCTION

Rapid advances in technology and computer-aided teaching have offered new opportunities and enforced the application of new tools, methodologies, approaches and frameworks to promote active foreign language teaching and learning. English, as a global language, is probably the most commonly spoken language in the world when combining the native and non-native speakers, and currently the language most often taught as a foreign language in the Croatian higher education.

Creating a successful language learning environment within the higher education environment is becoming ever more complex. Information behavior and information preferences of students are also constantly changing and should be regularly examined. Faced with the new Web 2.0 services that include both the technological side by introducing new technologies and the new patterns of information behavior geared towards a more participative and socially oriented environment, new approaches based on individualization or autonomy are constantly examined.

In order to fulfill its mission of educating competent professional personnel for the needs of the real economy, University North implemented Moodle, an open-source Learning Management System (LMS), one of the currently fastest growing successful e-learning systems in the higher education environment, used in 231 countries and with nearly 100 million users worldwide [1].

In that context, Moodle has been receiving more and more popularity in higher education in the recent years, especially in the learning-teaching process applied in the English courses, offering a wide range of courses covering English for Professional Purposes. Teaching foreign languages for professional purposes is considered to be a priority in the updating of engineering education, and the ability to communicate in other languages is becoming an integral part of the professional competence of any specialist.

II.   MOODLE AND LANGUAGE LEARNING APPROACHES

From the perspective of language learning approaches, Moodle implements two main approaches: the blended learning approach and the communicative approach.

The term *lended learning* originated around the year 2000 in the business world in connection to corporate training, followed by higher education, and finally it appeared in the world of language teaching and learning [2]. Blended language learning (i.e. integrating the use of technology into the classroom-based learning and teaching) is still a relatively new concept, but recent research appears to indicate that when "appropriately" implemented, blended learning can significantly improve the learning experience [3].

The communicative approach to language learning allows language teachers to follow the goal of making "the student the center of the learning experience wherever possible." Moodle supports the key features of Communicative Language Learning, some of which are learner autonomy, the social nature of learning, curricular integration, focus on meaning, diversity, alternative assessment, the role of teachers as co-learners, etc. [3].

While the blended learning approach provides the environmental setting within the Moodle platform, the communicative approach focuses on the roles of students and teachers. The connecting point between those two approaches, namely the learner and the environment, is the learning activity. For this reason, the design of blended learning needs to be centered on the activity design [4].

Along with the two approaches discussed, it is important to indicate and categorize the activities based on their learning outcomes. One of the most widely applied taxonomies of learning outcomes is Bloom's taxonomy that identifies six levels within the cognitive domain, from the simple recall or recognition of facts as the lowest level, through the increasingly more complex and abstract mental levels, to the highest order which is classified as evaluation [5]:

1. **Knowledge:** define, list, name, order, recognize, relate, recall, repeat,
2. **Comprehension**: classify, discuss, explain, identify, indicate, report, review, select,
3. **Application**: apply, choose, demonstrate, sketch, solve, use, write,
4. **Analysis**: analyze, calculate, compare, contrast, discriminate, examine, experiment,
5. **Synthesis**: assemble, construct, create, design, develop, formulate, prepare, propose, write,
6. **Evaluation**: assess, attach, choose, compare, predict, rate, select, evaluate.

In order to select the best approach in EPP teaching (using the most appropriate activities within the Moodle platform to develop targeted outcomes), it is necessary to examine the Moodle activities within the language learning framework along with the levels of each activity within the cognitive domain.

III. MOODLE ACTIVITIES IN EPP TEACHING

In the last few years, while trying to improve the management of the English language course at the University North, Moodle has emerged as an invaluable asset of that process. Considering the fact that the course is aimed at teaching a foreign language for professional purposes, a certain level of autonomy is required from students, and that is seen as an additional means of developing the students' skills needed in the professional environment. Students who participate in Moodle-based courses not only gain knowledge in the areas stipulated by the curriculum, but they also develop practical skills such as decision-making, applying critical evaluation, and problem solving [6]. As a learning platform that allows students to access the contents of the course 24/7, students are given a certain amount of autonomy in their learning process. They can access the lectures and assignments at any time and it is up to them to decide when and how fast they want to go through the course and cover the discussed topics [7]. In lieu of being pressured into learning in a traditional class environment only, they exercise individual control over the speed of their work by being given the option to learn and revise any material that they have missed or insufficiently acquired during the face-to-face lectures.

TABLE I. MOODLE USAGE STATISTICS AT THE UNIVERSITY NORTH (2016)

oodle module	
NO. OF COURSES (ACTIVE)	647 (300)
NO. OF ENROLLED STUDENTS	2000
FORUM	724
LABEL	1557
QUESTION	465
RESOURCE	12 937
TEST	800

Moreover, Moodle offers a wide range of activities that can be used to improve the learning of a language. The activities and their advantages in EPP language teaching are presented and discussed in the next section.

Chat - Students can get together for a chat session which allows them to enter into dialogue with each other. By discussing a certain topic with each other and the teacher, they practice the use of the language and they draw each other's attention to the possible errors they might have overlooked, or they give each other additional ideas for the solving of the given task. However, it is important for the teacher to offer guidance when needed and to steer the wheel if the students go off track [8]. Levels of activity within the cognitive domain: Comprehension; Application; Synthesis; Evaluation.

atabase - With the help of the Database module, teachers can help students build vocabulary lists through which students master a specific professional matter introduced during the lecture. The database can function as a personal glossary which students can consult when they revise for the exam. Levels of activity within the cognitive domain: Knowledge, Application, Analysis, Synthesis, Evaluation

orum - Forum is an activity that allows a group of Moodle users to ask and answer questions [8]. Students can ask the teacher and each other for help by asking questions, and at the same time help others by answering their questions and giving their input on a certain matter. Moreover, students can subscribe to a certain forum and receive an e-mail when someone offers a new answer to the posed question. As with the Chat module, it is important to give students a certain level of autonomy, i.e. to make them feel as if they were in charge and thus give them the option to express their views and opinions more freely, without the sense that they are being "monitored". Levels of activity within the cognitive domain: Comprehension, Analysis, Synthesis, Evaluation.

ot otatoes - This module is defined as a free, easy-to-use quiz-making program ideal for setting up quick quizzes to review or test students [8]. This module can cover the testing of basically all main elements of a

language, from grammar and vocabulary to reading and listening. Cloze tests, crosswords, matching exercises and multiple-choice are the most common types of Hot Potatoes tests [3]. They are quite attractive for students because they require their full attention when eliminating the incorrect answers, but also because they are allowed to use the "back" button, which in a way allows them to "cheat" and improve their results. Levels of activity within the cognitive domain: Knowledge, Comprehension, Application, Analysis, Synthesis.

ournal - This module allows students to keep a diary where they can reflect on their learning process and discuss the matters that they did not manage to master during class and have thus been left unclear. There they can also write drafts of their writing assignments. Considering the fact that it is only the student and the teacher who have access to this module, they can ask the teacher questions about a certain lecture or matter that they do not feel comfortable enough to ask in the Forum. They can then correct their assignments in accordance with the teacher's comments [7]. Levels of activity within the cognitive domain: Comprehension; Analysis.

esson ecture - The Lesson/Lecture module requires a lot of patience from teachers because it is quite complicated to set up, but at the same time it is very rewarding as it allows them to progress step by step through a lesson. For example, students are given a certain text to read, and then they are given a question accompanying that text. If they answer the question correctly, they move on to the next page where a next question or assignment awaits them. On the other hand, if they answer the question incorrectly, they can either take the question again or choose to go to an easier one. This module can be used for the presentation of cultural information, teaching grammar, reading professional texts, listening, etc. [7]. Levels of activity within the cognitive domain: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation.

uestionnaire - The Questionnaire module is a customizable survey which can be very useful for getting feedbacks or opinions of various aspects of the course, or for getting students to write their own surveys and practice asking questions [8]. Moreover, by asking them questions about a certain text that they had to go through, the teacher can get a solid evaluation of the students' preferences and on the basis of the results, work on the improvement of the materials. Levels of activity within the cognitive domain: Analysis, Synthesis.

ictionary - This module serves a similar purpose as the Database module. Students make vocabulary lists to which they add definitions, and that can help them master a particular matter in a more concrete, substantial way. It also allows them to find in one place the vocabulary they need in order to pass the course and that potentially shortens the time they would usually need to prepare for the exam. Levels of activity

within the cognitive domain: Knowledge, Application, Analysis, Synthesis, Evaluation

C – The abbreviation stands for Shareable Content Object Reference Model. Teachers can save Hot Potatoes quizzes as a SCORM file, which bundles all the files in the activity and teachers can then import the SCORM file directly into the course home page [8]. SCORM files enable a more synoptic reading of the data due to the fact that what SCORM does for the programs is equal to what PDFs do for documents. [8] Levels of activity within the cognitive domain: Application.

urvey - A Survey is comprised of questions with slightly different answers, which then allows the teacher to collect the answers in the form of a percentage and thus get a better view of the students' opinion on a certain topic. Teachers are yet again given the opportunity to get an insight into the students' opinion of the course and on the basis of that they can implement certain changes and improve the course. Levels of activity within the cognitive domain: Analysis, Evaluation.

Test - This module allows teachers to conduct continuous assessment and/or final assessment via Moodle. Teachers can create a number of questions for the evaluation, limit the time the students have for solving the questions, and based on their performance, and decide on the final grade. Levels of activity within the cognitive domain: Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation.

i i - As the name discloses, this module functions as the Wikipedia webpage, meaning that its content can be edited by all users, i.e. course participants. This module is good for collaborative work such as joint writing projects and task planning [8]. This module enforces the sense of team work, while at the same time it allows the students to keep a certain level of autonomy. Levels of activity within the cognitive domain: Application, Analysis, Synthesis, Evaluation.

Assignment - The teacher gives out an Assignment and posts the instructions in the activity description. Students have to respect the deadline when they submit their Assignment as an attachment. The Assignment is then reviewed and assessed by the teacher, who is the only one who can see the submitted file. This module often goes hand in hand with the Test module in the sense that it plays a crucial role in the final assessment. Levels of activity within the cognitive domain: Comprehension, Application, Analysis, Synthesis, Evaluation.

or shop - Workshop is similar to the Assignment module, the only difference being that as opposed to the Assignment module, it can be peer-reviewed before the file is submitted, meaning that it is not only accessible to the teacher, but also to other

students who can write their own comments and contribute to the final version. Levels of activity within the cognitive domain: Application, Analysis, Synthesis, Evaluation.

As we can see, Moodle offers a wide range of learning activities that can be implemented in the EPP teaching. The activities are imbued with a number of advantages, both for the students and the teachers. Firstly, the students are given a much higher level of autonomy not only on the basis of source availability, but also on the basis of modules such as Chat and Forum, where they can ask both the teacher and their colleagues questions that can help them in mastering the course. As it is often the case, some students might find it easier to ask a question via an online platform than during a face-to-face lecture where they feel more exposed to the reaction of their environment. Such modules increase the level of student activity and investment. Moreover, students of technical studies often shift their focus away from foreign language courses towards their main interest, the technical courses [4]. Under such circumstances, it is necessary to spark their interest by engaging them in cloze tests, multiple-choice exercises, crosswords, and matching exercises offered by the Hot Potatoes module. One additional advantage offered by Moodle through the Hot Potatoes module is the involvement of multimedia tools [7]. The Hot Potatoes module not only makes language learning more interesting to students by employing a variety of game-like teaching possibilities, but it also enhances their ability to focus on particular information and it develops their skills of information processing [9]. Moreover, what is one of the most important features of Moodle is the development of student autonomy, which stays with the individual far beyond the completion of the EPP course. Throughout the years, it has been observed at the University North that with the blended learning method that is implemented in the EPP course, students have become more active and interested in the lectures, and with each assignment, the number of students who fulfill all the requirements introduced at the beginning of the course is growing.

IV. THE TEACHER'S ROLE

As is the case with face-to-face lectures, the role of the teacher is indispensable in the blended learning method. Firstly, teachers should always be on the alert when it comes to their professional expertise due to the fact that the area of ICT advances rapidly and if they wish to offer their students the best possible working environment, they have to follow all the novelties that are constantly being introduced. Teachers have for a very long time been blending face-to-face lectures with various kinds of technology-assisted methods [8]. However, with the upsurge of Web 2.0, teachers have been given a very powerful tool which can help them with the advances in the foreign language teaching. Hence, it is crucial that they be methodologically careful when choosing the materials for their students and the means through which

they will implement them. Back in 1999, Egbert and Hanson-Smith suggested eight "optimal" conditions for learning a foreign language, and one of them stresses the importance of learner autonomy [10]. Much of the learner autonomy lies in the hands of the teacher. It is on the teacher to encourage students to actively participate in the discussions, but yet again, they should not be too overwhelming in doing so [8]. One of the best modules that plays a significant role in the development of student autonomy is the Forum, which empowers and encourages class members to give answers to their classmates' questions, which not only supports camaraderie, but also gives students the sense of "being in charge", whereas the teacher is no longer seen as the only source of knowledge [8]. The students then not only feel autonomous, but they also become more motivated. However, autonomy aside, it is of extreme importance to set boundaries. Naturally, the whole point of the blended learning method is to allow students to decide by themselves when they want to study, but it is up to the teacher to ensure that they have indeed met all the requirements by the end of the course. Therefore, it is important to clearly state and explain the goals and objectives of the course and set the necessary deadlines when it comes to the enforcement of modules. Through the implementation of rules, certain managerial skills that they will need in their future professional life are developed.

Last but not least, feedback. When it comes to all types of learning, but especially language learning, it is very important for students to receive feedback as a confirmation that their learning style and strategies have been successful, or as an input on what should be modified or additionally worked on in order to reach the desired level.

V. CONCLUSION AND FUTURE WORK

The role of the blended learning method has in the last couple of years become increasingly popular, especially when it comes to the teaching of foreign languages. Moodle, an open-source learning management system, was introduced at the University North as a supplement to face-to-face lectures and it has proved to be of vital importance in the EPP teaching. Employing a variety of Moodle modules, the EPP course has progressively been working on the development of student autonomy and achieving the optimal conditions for learning a foreign language. Even though there is still room for improvement in the use of the modules, the blended learning method has been recognized as a tremendous asset in the EPP teaching, as it gives an exceptional opportunity to integrate the information advances with the advances of students both in their studies and their future professional life.

In this light, this paper can serve as a framework for the possible applications of different Moodle elements in the teaching of English for Professional Purposes. Future work in the field should be aimed at carrying out case studies of applying different Moodle activities based on

the proposed theoretical framework and measuring the student competence and satisfaction level within the blended learning approach.

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