



Solving ESP Problems Using Moodle Platform: E-learning for Postgraduates and Masters of Physics

Nellie Z. Shamsutdinova

Kazan (Volga Region) Federal University (Russia)

nellie.shamsutdinova@kpfu.ru

Abstract

E-learning as an effective technology has become an integral part of contemporary university education. Nowadays it covers almost all its levels and is widely used in various disciplines' studying. Based on computer technologies, e-learning implies the creation of multimedia courses for certain groups of students and strong possibilities for their knowledge control. It also provides the access to on-line texts alongside quick results processing. Distant educational courses solve a lot of technical problems as there is no need in large premises for classes or necessity to find substitution for teachers who are absent for any reasons. E-learning is designed around the learner and is absolutely student-centered. The materials online can be download by students for reading later. It gives everyone opportunity to study in any place, where there is an Internet access. It is especially important for part-time students, as well as disabled or other people, who cannot leave home for doing a course. The learners can choose the best tutors and lecturers and realize their individual programs, select order of subjects studying and the pace of learning. There are neither problems of search nor acquisition of books or other educational aids. Distant education is especially convenient for integral specialties which are in demand nowadays. It is much cheaper (or absolutely free) than traditional courses of education in commercial institutions. E-learning is very helpful for the administrative staff of schools and universities as it implies teaching students and inviting top-lectures, which is of most importance for educational institutions located in small towns and cities. Using distant-learning courses schools and colleges of periphery can compete with leading universities in the capitals and big cities. The same teaching staff can work with bigger audience of students, thus, reducing expenses per one student. The Moodle system proved to be one of the most effective solutions for university educational programs. One of its main advantages is access to the Internet, which contributes to the flexibility of educational process. Having been initially developed for university education, Moodle platform installations are widely applied for school curriculum as well. "Grammar for Masters of Physics" is a Moodle course for bachelors, masters and postgraduates, who specialize in physical science and study English as a foreign language.

E-learning has become an integral part of contemporary high-school education. If two or three years ago its effectiveness was passionately disputed among the specialists teaching both science and humanities, at present it is taken for granted that e-learning covers almost all levels of university studies and is used in different disciplines' studying; and the English language comes first among them.

The reasons for gaining such popularity can be explained by many factors. One of them, and perhaps, the most obvious, is the greater role of foreign languages in Russia and in the republics of CIS nowadays and rich opportunities for specialists having good knowledge of language to make a career on the international arena both in the country and overseas. For the last ten or fifteen years one can trace a strong tendency among young people of our country to master several specialties, getting double-major diplomas and to work in the fields of science, which are on the boundary of two or more disciplines. But e-learning courses are popular not only among those who are involved into so-called integral specialties.

Constantly developing technologies let us create multimedia courses for certain groups of students and provide the access to on-line materials alongside quick results processing. It is of importance for many professionals working in various spheres of economics and science to master their language while doing distant educational courses. In this case there is no need in special premises for classes or necessity to leave home for doing a course. Every learner can select a subject to be studied to their taste as well as pace of learning.



The other factor, which makes e-learning more and more popular and available nowadays, is that it is much cheaper or even absolutely free than traditional courses of education in commercial institutions. It gives everyone opportunity to study in any place, where there is an Internet access. It is very important for part-time students and disabled people as well. It goes without saying that distant educational courses solve the problem of educational aids as there is no need in books acquisition. The commercial profit of e-learning is apparent not only for students, but for institutions and administrative staff as well. Courses, created by top-lecturers from the leading universities, can be available for bigger audiences in small towns and even villages, in schools and colleges of periphery.

The third factor that influences the choice of educators in favor of e-learning is that in the XXI-th century we work with the generations of the so-called "digital natives" [1], born after the mid-1980s, who have been immersed in technology since their early age. Contemporary students are not used to waiting. They can download things easily on demand and are quite comfortable with hyper texting or parallel processing. Unlike their teachers, who belong to other generations of "digital immigrants", many of them find learning process interactive and think that it should be fun.

Moodle platform (Modular Object-Oriented Dynamic Learning Environment) answers all the requirements of contemporary educational process. This platform, which is constantly in evolution and also called Course Management System (CMS) or Learning Management System (LMS), presents information and learning experiences for students. It is an open software, being used by many institutions of higher education as well as some secondary schools and colleges. It provides students' collaboration, critical thinking and transparency.

One of the undisputable advantages of distant education (e-learning) is that it is not teacher-centered, but learner centered. The theory of education gives several metaphors that describe the role of a teacher in a learner-centered process. The teacher can be either a "gardener" and "plants ultimately do ultimately do the growing" or a "coach", but the "players play the game", or a "mountaineer guide, who links the students together but they do the climbing" [2].

Russian pedagogic also accentuated the role of a teacher, necessary for effective learning. Among the well-known models of communication between a teacher and learners there are the following: 1) "the raft going with stream", which supposes absolute indifference of a teacher towards the educational process; 2) "the Great Wall of China" implies an authoritarian style of teaching. But 3) "the boomerang flying back" is considered to be the most effective one as it provides a democratic way of collaboration between a teacher and students.

The democratic style of interaction in turn was described by James Henderson, who formulated its three main principles as follows: 1) subject learning, i.e. students study best from subject matter presented thoughtfully; 2) self-learning, which implies everyone's being engaged in the generative process; 3) social learning, that is social interaction with diverse others the target of generosity [7].

Several decades ago Russian theorist Lev Vygotsky introduced the notion of ZPD (Zone of Proximal Development), where students benefit from learning through one another. Vygotsky stated that learning should be aimed at the developmental levels that have already been reached by students. All the tasks are expected to access a level, measurable to the students' current stage of development [5].

The ideas of student-centered learning have been also supported by well-known theorists like Carl Rogers, John Davey and many others. There is strong argumentation for student-centered learning being integrated into the contemporary educational process: first of all, it strengthens students' motivation and responsibility for their own learning. Learners are completely involved in the active process of studies and have opportunity to choose their own learning style. The teacher is expected to guide students into new interpretations of the material under study. The modern educational process in general implies innovative ways of teaching in order to cover wide audience of diverse learners. Allowing students to set the stage for their own academic success, the educational process is sure to be more productive.

Learner-centered approach demonstrates that the focus of a teacher is less on teaching and more on learning. The teacher must learn what and how to clean up, or even if to clean anything up in learner-centered teaching, which shows new roles of educators, who are gradually doing less asking or answering questions, solving the problems or giving the examples. Learner-centered teaching implies that teachers reduce telling the learners all the time in order to avoid the situation, when students expect teachers to tell them everything. There should be more designing of activities and



assignments. Students are to learn from one another; it can be peer editing, group work or team work that results in shared accomplishments. The teacher is expected to create conditions favorable for critical feedback.

The Moodle platform of Kazan Federal University suggests different e-learning ESP courses, created by the teaching staff for students of various faculties and specialties, including educational courses of the English language for those who study mathematics, political science, computer technologies, international relations, etc.

“Grammar for Masters of Physics” is a Moodle course, developed for post-graduates, bachelors and undergraduate students of physics department, who are going to get their Master’s degree in different fields of physical sciences, and intends to fill a one-year gap in their studying English before post-graduate exams. Being concentrated on the issues of contemporary physics, it is based on several original papers, written by world-famous physicists. The course implies the following types of activities: adding a glossary, inserting wikis into the course, supporting collaborative efforts of students within a workshop, doing on-line tests suggested in quizzes as well as working with basic Moodle tools, such as chats, forums, databases and many others. It consists of ten modules each of them is devoted to a certain aspect of English Grammar. As every module contains tasks and assignments based on original texts (such as matching, short answers, etc.), and results in a final tests, the most preferable Moodle tools applied in the course were the Assignment, the Glossary, Adding a Webpage and the Quiz.

One of the main and most convenient Moodle tools – the assignment – allows teachers to upload students’ work in form of mp3, Word document or YouTube video. After the assignment having been graded by the teacher, the feedback can be sent to a student by e-mail. The assignments are available at any time with a start and close date.

Among the main advantages of the Glossary one can mention the possibility to sort vocabulary and collocations, putting the words in alphabetical order or adding automatic hyperlinks. It contains the academic word list and can be edited by students.

The Quiz is one of the most popular tools among Moodle courses’ creators as one can hardly avoid using tests after one or certain number of units. The quiz allows educators to create, for example, multiple-choice and matching exercises. It can insert a link to multimedia materials and generate results for a teacher as well. It has an opportunity to display the scores and time spent by learners on the test or, if desired, the number of attempts made by a student to fulfill the task. It produces individualized assessment and helps teachers to identify the students’ who need more help or further improvement of their language skills.

Adding a Webpage tool lets the educators create a webpage to present it to the group of learners. It gives rich opportunities for instructors to paste test-based information. Course developers can embed PowerPoint slides or multimedia files-lectures or short movies. There is a slideshow world’s community for sharing presentations on the Moodle platform. More over Moodle platform implies various formats of material presentation. It can be either a video material, or audio file or hypertext, flash animation or video conference. Some creators and developers of Moodle system say that possibilities of the platform are endless.

The Moodle system suggests making use of different applications. For example, we include audio file based on the Mendeleev Table of Chemical Elements into the course (see Appendix) in order to improve learners’ pronunciation of chemical elements, which they often mispronounce because of mother tongue assimilation. The correct variant of pronunciation can be heard after choosing an element by simple clicking on it.

Although the advantages of Moodle platform is out of the question, there are some drawbacks such as the absence of face-to-face communication between teacher and students, impossibility to check the whole process of task implementation, i.e. if a learner was doing the task without anybody’s help. Nevertheless, the practice of using the platform for teaching different subjects shows that e-learning is one of the most convenient and promising ways of teaching nowadays.



References

- [1] Tunks, Michael. *Using Moodle in Your Classroom*. Publishing: <http://www.minnisjournals.com.au/educationtoday/article/Using-Moodle-in-your-classroom-411>.
- [2] Rice W. (2006). *Moodle E-learning Course Development: A Complete Guide to Successful Learning Using Moodle*. Birmingham - Mumbai: Packt Publishing. <http://www.kemsma.ru/rio/rice.pdf>
- [3] Gilmutdinov A.Kh., Ibraghimov R.A., Tsvilsky I.V. (2009). *Elektronnoye obrazovaniye na platforme Moodle*. Kazan: Kazansky gosudarstvenny universitet.
- [4] Ustyugova V.N. (2011). *Sistema distantsionnogo obucheniya MOODLE*. Kazan: TGGPU.
- [5] Vygotsky, L.S. (1978). *Mind and society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- [6] Pedersen, Susan & Williams, Doug. (2004). *A Comparison of Assessment Practices and Their Effects on Learning and Motivation in a Student-Centred Learning Environment*. *Journal of Educational Multimedia and Hypermedia*, 13(3), pp. 283–307.
- [7] Henderson, J.G. (1992). *Reflective teaching: Professional artistry through inquiry*. Upper Saddle River, NJ: Merrill Prentice Hall.
- [8] Iyoshi, Toru, Hannafin, Micaheal & Wang, Feng. (2005). *Cognitive Tools and Student-centred Learning: Rethinking Tools, Functions and Applications*. *Educational Media International*, 42(4), pp. 281–296.