# Creation of e-Courses in English for Students of Production Technology

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*Abstract* - **E-learning is one of the most fashionable trends in contemporary teaching. It can be defined as an integrated system of education with the central focus placed on the students. Students use given forms of learning - electronic methods for the processing, transmission and storage of information on the creation and delivery of content, activities, problem solving, evaluation, communication, administration and management of education. The aim of creating e-courses in compulsory and optional subjects within the English language for students at Bachelor and Engineer's level at the Faculty of Manufacturing Technologies - in new accredited study programs is not to create a system that does not use traditional education during the semester within language seminars, but such a system, which would meet the requirements of the best foreign language learners and ensure the highest quality of education.**

*Keywords* – **e-course creation, foreign languages teaching, Moodle.**

## 1. Introduction

Teachers of foreign languages in providing e-courses in a given language (English, German, Russian) cooperate with the Institute of Computer Technology at the Technical University in Košice. It's workplace with university-wide scope, whose main mission is to ensure the implementation of tasks related to the development and use of information and communication technology at the Technical

University in cooperation with the faculty's computer nodes. One of the main fields of activity of the Institute also includes the area of information systems, which provide development, implementation, management and operation, including the integration of university-wide information systems based on advanced technologies such as SQL, client / server, web and the like. The most important of them is the pedagogical information system. The role of the Institute of Information Technology is also to introduce modern information and communication technologies into the real practice of the University and within it, also, to individual faculties. The Moodle software package for the development of educational systems and electronic courses on the Internet can be included to such. The core of that system is electronic courses at individual faculties, including the Faculty of Manufacturing Technologies in Prešov, Technical University of Kosice, where lessons take place. In this course, teachers can also save documents to develop activities with students within teaching teams, communicate with each other and thus monitor the whole teaching process.

## 2. Management of foreign language teaching for students of production technologies

It was decided to upgrade the teaching system and improve methods for the teaching of foreign languages at the Faculty of Manufacturing Technologies with respect to the situation and the possibilities offered by the University. A number of positive findings have been reached based on past experience; an innovative introduction and use of information and communication technologies has been gained. For example, if we compare two foreign language courses that have the same content, one of which is guided using classical forms and the other combined forms, it was discovered that the popularity of the course conducted utilising technology and new means of computer technology is much more attractive for students. We consider that this is the natural desire of young people and future engineers to get to know something new and

use new technologies. This is not only for teenagers, who began university studies after graduating from high school. We can confirm as well that this is also the case regarding external studies, in which a number of students from among the older generation can be found. We also found out that after completing the e-course, students with certain barriers when working with a computer became enormously proud of their achievements and looked forward to not only doing well, but also progressing in working with the PC, the Internet and so on.
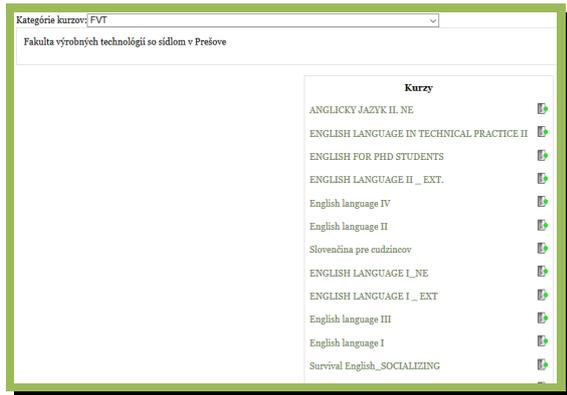


*Figure 1. Examples of current courses at the Faculty of Manufacturing Technologies in Prešov*

It can be noted that, over the past decade, technology has changed the world beyond recognition, which significantly affects the work of teachers and equipping schools with computers. It provides a greater possibility and opportunity for teachers to provide the students not only with classic study materials but also many electronic ones. Lack of instructional materials - professional foreign literature relating to the study, in other words, "tailor-made" for individual fields of study branches and study programmes, is often one of the reasons to also use information technologies in teaching foreign languages at the Faculty of Manufacturing Technologies. However, only some topics in the professional foreign literature used in seminars are suitable for the study of manufacturing technologies. This was one of the reasons why we decided in the project *Implementation of Blended E-learning to the Process of English Language Teaching within the Newly Accredited Study Programs at the Faculty of Manufacturing Technologies of the Technical University of Košice* to develop topics individually for lessons of English and especially Technical English [1]. Students can only obtain the available information sources previously presented during the

seminar by teacher, the procedures by which to acquire new knowledge and understanding of manufacturing technologies as well as advanced manufacturing processes. The use of Moodle technology offers a very effective opportunity to change the learning process in foreign language learning. Although it was originally designed for distance education, it can now be used not only for e-learning foreign language teaching but also in combination with other forms of teaching. Several studies show the effectiveness of combining e-learning (blended learning) through the Internet and so-called presence (face to face) education. One part of the course, therefore, can be carried out with students during seminars in traditional classrooms and the second part by e-learning (this applies in particular to additional professional foreign language study materials, worksheets, etc.). Blended learning allowing the teacher to decide to what extent he would use the support of the e-learning environment and when it is better to achieve personal contact with students [2].

We practice alternation of face-to-face with e-learning during the semester. We believe the creation of e-courses with other teachers within foreign language teaching, as well as choosing appropriate topics to teach, and that, in addition, the electronic platform extends the possibility of teachers communicating with students based on individual needs in real-time or as agreed. Given the fact that this is a modern platform for education, generating conditions for lifelong learning, we encourage students to intensively and effectively use this opportunity to become familiar with it already during university (some students had an even earlier command of it in secondary school) study and prepare well in that situation for their future jobs and career [3].

When creating a new course we shall proceed as follows. First, the settings of the new course are displayed; this is done in a specific course, by clicking 'Edit settings' in 'Course administration' in the block settings. The page with a form is displayed. Then we have to enter the name of the course, in our case, for example, for the actual semester we created a new course *English language II*. This title appears in the list of courses as well as on the course home page. Then we have to set the date from which the course will be accessible to students. The setting of this item is meaningful during the winter and summer semesters especially in the weekly course format. In this case, it launches a week of just the date that you choose as the beginning of teaching in each semester.

*Figure 2. Sample of the lesson with selected activities and resources.*

Each week automatically indicates the date when a topic should be dealt with, or the exact date of the seminar can be written individually. Each course should include a brief description, goal, and eventually the competencies that the student will acquire after the successful completion. Then we show students what is required in order to complete the course, what roles and responsibilities must be fulfilled during the semester in order to complete their compulsory course in the form of a graded credit. A summary is also displayed together with the name of the course in the public part of the system. It provides basic information for all students enrolled in the course, so its completion is very important.

## 3. Formation of an e-learning course

We are trying to incorporate the content of the e-learning course *English language II* into individual sections. The chapters are graphically separated when the main page of the e-learning course is displayed and each section is numbered, or the time period for study is listed there. In our case we set the 13 sections to be viewed in each new course, which corresponds to the length of one semester. Teachers can, however, change the number of sections using the 'Number of weeks / topics' via the 'Edit settings' link in the course block (Settings → Course administration → Edit Settings). Editing and the completion of the course therefore consist mainly of the editing of individual sections. The first step to editing the course is 'Turn editing' in the top right corner of the main course page or by clicking on 'Turn editing' (Settings → Course administration → Edit settings).

We can add different resources and other activities in each created e-course and within each lesson during seminars on various topics. To add an URL, for example, course creators have to fill in the required fields in the form that appears - The name and description. The most important part of adding a link to another website is an external item URL in the 'Content' section. We noted therein the URL of the website where students can find the required study material recommended by the teacher. We select the way you view content in one of the other groups of items using 'Options'. We click on the left of the name of an option ('Appearance'), if we want to see all the options for viewing pages. In the first item 'View', we can choose from the following options: Automatically - according to the source - the address system chooses the best display option automatically; Insert - study material contained in external links will be displayed as part of the course page in the main section of the page; and Open - attached study material will be displayed in the same browser window [4], [5].

Using input file we can also use multimedia documents in the e-course. These provide much greater opportunities than just ordinary texts. MP3 and MP4 files are particularly recommended based on my own experiences, mostly for use in teaching foreign languages. A number of exercises on listening comprehension, complementarity of technical terms with MP4 files and so on for students of production technologies have also been prepared. Moodle provides comfortable work with media files with built-in filters. These filters are adjustable according to the course. It is therefore up to the teacher whether he turns them on or not. To insert the listed multimedia files is the same as with other files.



*Figure 3. Demonstration of exercises on listening through the inserted MP4.*

Besides this inserting of study materials into the e-learning course, the great benefit of education in Moodle platform courses is the fact that the teacher offers a variety of activities that motivate students. Which activities are quite often applied in English language teaching within the study of manufacturing technology and using e-learning courses? Firstly, it is a debate forum to which the students can send their contributions. These notes can be read by all course participants. Chat-rooms can be included among so-called online forms of communication, even when a student needs to be directed to teachers during his independent work. This is a conversation in real time using the Internet, often within a single study group or individual study programs with each other, but

also individually with the teacher. When I decided to put this activity into the course, I had to specify the time (the best time of ongoing lessons during the seminar), with different groups of students in selected fields of study and programs when all students should be available online. In Moodle there is also an activity directly intended to ascertain students' views on specific issues; in our case, the most common specialized topics, due to the fact that we work with students of manufacturing technologies at the Technical University. This activity is called 'Inquiry'. In the current version of Moodle activity designed to work with roles, which is called 'Exercise' is directly available. The teacher who creates an e-learning course has, at his disposal, almost everything that different option collection tasks may require. This activity allows students to specify the task, to be drawn up by a certain date and then send it to the teacher electronically [6].

A part of the teacher's work in e-learning is the collection of teaching feedback, the extent to which the student has mastered the professional foreign-language study material or acquired knowledge can be valued. In this activity, e-learning courses developed in Moodle can significantly help, as it offers an activity test. The formation of the test can be approached in two ways: 1. via the so-called 'Bank of issues' and particular tests created after its establishment; or, 2. via the creation of an 'ongoing issue' during the creation of a specific test, and these issues are automatically saved into the question bank. A new course can be added into the test in 'edit' mode; to do this, click on the 'Add activity or resource' and select the 'Test' option. The setting is divided into units from general settings, through timing, display marks, to method of imaging the test. Moodle provides the following types of questions: essay, simple calculation, short answer, numeric response, true / false, the corresponding random, short answer, multiple answers, submitted responses, answer with a calculation, computers with multiple responses, consensus, description. In some situations, we need to develop students' answers in the form of a short essay [7]. These are known as 'open' type questions. In contrast to previous types, Moodle cannot evaluate it automatically. Questions of this type will be marked by the teacher after reading. To students' answers, the teacher can enter a comment and a point evaluation.

To finish creating a new test, points and maximum grade need to be saved. When you want to see the results of your work, choose 'insight'. End the test by selecting menu 'end attempt'. A list of all issues with their current question status is displayed (unanswered, answered, incomplete). The student may yet decide whether to return to the test or can

conclude the test by selecting 'Send and end all'. In this section, students should be advised not to forget the last step. From my own experience and knowledge, it can happen that if a student sat the test, ended it, but forgot to send it, the teacher could not see the grade or percentage evaluation of the test, because the test is still active and it appears as if the student is still working on it.

The focal point where the teacher and the student see all assessed activities in English is the grade statement. In this statement, the name of the course, the individual categories and all the columns, each for one evaluation (assignment, test, computed grade from other columns, etc.) can be found. In this option, the teacher sets what is reproduced while meeting the percentage levels for analysing the test. It is recommended to use the options on the grading scale to determine the percentage scale. Grades shall be generated after a student takes the test directly in the line of total feedback. The last lines contain the average grade of the course participants, or one selected study group [8]. Of course, not every course must include all the referred components. It should also be born in mind that the creation, modification and preparation and the final use requires a lot of time and effort from the students.



*Figure 4. Sample: feedback and correctness of drawing up individual exercises in the test.*

## 4. Conclusion

The aim of the paper was to get familiar with the work being done on developing e-learning courses for seminars in foreign languages using the Moodle system. Based on the above knowledge and experience, you can create e-courses and use in them ideas and suggestions that will help students of production technologies in its successful management. In conclusion, it must be emphasized that after the creation of the course and before its use we should not forget to check some items: to find out whether all students will stick to the timetable; to set opening and closing times of each activity; to check the course settings - name, category, date of the course, the time of registration, the number of weeks or topics, accessibility of the course to students, to

set a course password so that it cannot be accessed by just anyone. It is also necessary to enter the maximum size of uploaded files, to set the theme for each week of the seminar. We should also recheck all activities in the course and hide those that we currently do not use.

I consider that in the context of globalization processes related to the achievements of information technology, electronic books, digital libraries and e-learning open up new dimensions of education. They also put new demands on the process of education and learning. The world of information technology, in which some students use it faster than their teachers, is becoming part of the existing infrastructure of many colleges and universities. Although the process of informatization in the education sector was carried out on various types of schools at a different pace, I believe that graduates of any of these schools should not enter into life or the difficult world market without the ability to use new technologies effectively in their field as well as in the future, which will be a part of their lifelong learning.

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