Application of e-learning in foreign language teaching at the technical university

Marta Gluchmanova *

Technical University of Kosice, Bayerova 1, Presov, 08001 Presov, Slovakia

Abstract

The paper tries to evaluate the work of the research team at the Department of Humanities and the Department of Manufacturing Management at Technical University. In accordance with the timetable of the project, we come to understand the most appropriate methodology in the teaching of professional foreign language material and equally important part of implementing and achieving the objectives of the project and the preparation of the most suitable study material for courses at the Technical university (Faculty of Manufacturing Technologies).

Keywords: e-learning; blended learning; foreign language courses;

1. Introduction

Many schools have long figured out that the Internet can be a powerful ally in teaching almost within each subject. Those who know its power use, offer online courses not only as a supplement to the current study, but as a full form of education for specific groups. Not only for students of full-time or part-time, for example, but also for people who cannot be released at the regular time or they prefer self-study at a time of their own choice. For this group, the school has undeniable advantages over the internet. If the development of the Internet and information

* Corresponding author. Tel.: +421907361383; fax: +0-000-000-0000 .
E-mail address: marta.gluchmanova@tuke.sk

1877-0428 © 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Peer-review under responsibility of the Sakarya University
doi:10.1016/j.sbspro.2015.01.1053
and communication technologies will evolve at a rapid pace, maybe a few years almost all courses will via the Internet. The quality of online education is increased by an alarming rate, and e-learning, as it can be said says otherwise, seriously competes with formal academic institutions. In this context, Katarína Bukerová recalls the history of online study finds that such training has its roots in Britain. Open University, which aims to further adult education and distance learning, is among the students currently the most popular universities in the UK. While offering online study (before the era were correspondence courses), it does not lag behind other academic institutions (Bukerová, 2014). She states that the Open University was the vanguard of a new type of online learning, which in recent years is gaining momentum. It is hiding under English acronym MOOC - Massive open online courses, or multiple open online courses. Even if the English word "mass" in this case is more marked.

Along with the beginning of the Internet first started talking about the revolution and later about evolution in education. In the early stages, it was assumed that the classical method of education will be completely replaced by another, an electronic. With time, started developing learning management systems under different names: learning through the Internet (Internet Based Training, IBT) Online Education (Online Learning). Currently, we are talking mainly about the management systems (management) teaching of English LMS Learning Management System. However, in Slovakia online education is still "in its infancy". Many schools offer it, but only as a component to the day or part-time, but in the U.S. it is much more popular. Its use and work with it, almost everyone of the students finds that online education is more challenging, because you need time to organize themselves and make the join in the discussion. We also say that from the subject know more, since assignments are really pushing to study almost every topic. It suggests that, as in the classroom, and online success rate rises and falls on particular teacher. True, provided that the school has created a workable system. I believe that flexibility of online learning suits students, as well as any teacher. However, it is difficult that the teacher has read all the posts from all students, then he must often send feedback to students for screen still felt human being (Bukerová, 2014).

2. Evaluation of the research team

In this context, I will try to evaluate the previous work of the research team of the Department of Humanities and the Department of Manufacturing Management within the KEGA (Cultural and Educational Grant Agency) project “Application of e-learning in foreign language teaching at the Faculty of Manufacturing Technologies". The main objective of the project was to develop the concept of foreign language learning through the implementation of the Common European Framework of Reference for languages (English, German, Russian) especially in teaching vocational technical language using e-learning as a complementary form of teaching. Another target of the activities of the project team was to prepare a methodology and appropriate study materials for specialized technical language in the context of foreign language courses and foreign languages in technical practice. According to the author such a form of education develops existing knowledge or improves known methods and procedures. It also allows teachers and students to find each other electronically, given form and pass the award tasks, evaluate students' work, to discuss selected topics, conducting surveys, develop student motivation, and the like. One of the objectives of the project will be making, implementation and knowledge from vocational technical language for the widest possible group of students, where appropriate, other potential bidders under the instruction of professional foreign language university-wide use of the Internet platform Moodle. E - learning can thus be defined as a system of education with the central role of the learner, which is used for the creation and delivery of content, activities, problem solving, evaluation, communication, administration and management of e-learning methods for the processing, transmission and storage of information. Thus, the aim is not to create a system that do not use the traditional education classes, but a system that would best suit the requirements of students and ensure the highest quality of education.

In accordance with the timetable of the project, we come to understand the most appropriate methodology in the teaching of professional foreign language material and equally important part of implementing and achieving the objectives of the project and the preparation of the most suitable study material for courses at the Faculty of Manufacturing Technologies. When teaching foreign languages continue to collect and compile the appropriate training material in printed form, or USB. We also began to prepare professional foreign language study material for the technical implementation of further work in the project. When teaching foreign languages (project coordinators) continue intensive studies appropriate foreign literature needed to prepare a special foreign language training materials and exercises in preparation for creating individual parts for e-learning and blended learning within it (Bielousova and Gluchmanova, 2011; Glendinning, 2007). At that time, preparations are continuing for the technical
implementation and training with a particular vocational foreign language text. In this phase of the project foreign language lecturers must cooperate more closely with experts on the technical implementation of the project that started using e-learning as a complementary form of blended learning model - the so-called blended learning.

In cooperation with the Faculty of Manufacturing Technologies technicians and experts for the technical implementation of the project, we installed new powerful desktop computers and monitors within multimedia classrooms for teaching foreign languages that students can effectively use this classroom not only for initial testing of processed and prepared various topics in English, German and Russian languages, but also in the future use the platform Moodle for foreign language learning. Windows Server 2012 and Windows versions call were installed in the technical implementation of the project in a multimedia classroom language for HP ProLiant server computer. After installation, they create a folder that can store files available on the Internet and launch the site. Officially, we have registered the domain name for the smooth running of the site http://www.dot.tk. Subsequently experts provided technical realization of interconnection domain and server. We are currently working on creation of the web site by writing command lines consisting of nine sub in Slovak and three foreign languages - English, German and Russian.

Coordinators of the project were selected the most appropriate professional texts for upcoming topics based on the study of the literature and consultation with representatives of specialized departments. Gradually they began preparatory work for the implementation of an Internet module and in mutual consultation with experts on the technical implementation of the initial work carried out under the technical implementation. After meetings and grant agreement investigators tasks with individual representatives for accredited courses and programmes at the Faculty of Manufacturing Technologies in Presov, we have chosen and wrote part of the best themes for complementary form of teaching in the bachelor’s and engineer’s study. We took while on the needs of their future career development and the possible application not only in the domestic but also foreign labor market. Within each topic foreign language lecturers (project coordinators) created the tasks of motivation, the activation of associations, and previous experience and knowledge on the subject, the next stage is trying to present the topic, as well as create tasks and exercises on semantic, understanding, reproduction and production, depending on the language level of the students. The last phase is focused on communicative grammar and practicing it. I consider, therefore, that within the technical implementation of the most important in addressing the project included the mere installation of Windows Server 2012, create the root directory accessible for launching the website, as well as overall creation and operation of the multifunctional language classrooms, domain registration, domain and server connection, linking web pages with university-wide LMS MOODLE, and even the creation of web pages.

The work of foreign languages teachers - project coordinators on preparation of dissemination seminar for foreign language teachers from secondary vocational schools within the Presov region could be expected to the important results of the project solution for a given period. Project coordinators presented the results achieved so far work on the running project. In the last phase of the project language lecturers will be working on the final layout and select those themes in the English, German and Russian language in the undergraduate bachelor and engineering study. Within each selected topics language, speech-language and communicative exercises will be processed and preferred. The methodology exercises focus attention on reading and understanding of the text and thus subsequently referred through appropriate exercises - exercises for understanding, reproduction, reproductive-productive exercises and exercises to develop freedom of expression. They also seek that students and graduates of the Technical University were able to understand and work effectively with professional foreign language text. The student thus learns to make decisions, and is responsible for his selection. In doing so, his computer skills and speech as well as socio-cultural competences are formed. Such a mixed model of teaching is part of the concept of modern education. All-trained foreign language technical texts and exercises will be implemented within the planned project outputs and tested during the semester with students for whom this project is also being prepared.

The testing prospective student is registered. He will choose his courses and he is able to start. He may or may not watch all the parts and make all entries from the teacher. However, if he wants to complete a course successfully, he must meet specified requirements. The course is supported by extensive Internet resources, including topical issues and specific assignments, which are organized and prepared by teacher. The tests will be used to get feedback from students. On this basis, we learn how to understand the topics being studied, which makes them the most problems. On the other hand, computer controlled tests enable trainers partial relief from manual and
repetitive work. Although computer controlled tests are not a panacea, I suppose that we can use them to improve the knowledge of students using the so-called self-tests (whether assessed or not), or to verify their knowledge. Activity allows the teacher to design and set tests, which can consist of several types of questions. The questions are stored in the database and can be used in different courses. Multiple attempts are allowed, each of which is remembered. Tests can thus allow multiple attempts. Each is evaluated and the teacher can choose whether to show correct answers or indicate what the response was incorrect. Unlike tests on paper, which must be manually evaluated in electronic test, the teacher can concentrate on other options. Test can be used either as a means of students self-learning by allowing them to develop a test more than once, or as a brief recapitulation of the curriculum, etc.

Tests have many different settings, and thus it is possible to make them diverse educational goals. Computer-assisted testing has its advantages and disadvantages. The idea is that the teacher does not have to concentrate on demanding correction of tests, elimination of errors in the numerator and the like. On the other hand, if he really wants to make the most of computer support, often has to regret some types of test questions, which are difficult to implement. To some points that should be kept in mind, such as: Questions should relate to the objectives to be achieved rate. For the most important topics of the course it is appropriate to have a number of questions, each exploring a different aspect of the topic. Questions should also be simple or complex and should be targeted to applications in the issue. In questions with multiple answers wrong answers should be logically derivable from some often incorrect assumption. It is better to use more test questions so that it fills the time needed for the development. Thus, risk of depreciation and other activities that are not related to the test are reduced. There are many strategies that affect safety tests. The easiest way is to have students in a computer lab, which are controlled by teachers or cameras. However, if students are allowed to work out the test at home or anywhere, it can be developed with a friend or a textbook. There is no perfect strategy which could prevent this phenomenon. One option is to set up the test so that it can be done only once in a given small time window and a time limit, the questions will be selected at random from a larger database. So happens that the friend will have to develop his questions and he will not have time to help (Tomlinson, 2011).

In this context, networking websites with university-wide LMS Moodle and creating courses and tests in three languages - English, German and Russian has been the benefit to students and also the project leaders of the e-learning in language teaching at the Faculty of Manufacturing Technologies. At present, under the project I expect greater cooperation of foreign languages teachers with experts and technicians. They will operate with specialized texts and exercises to enter them into the system to use e-learning as a supplementary forms and methods of foreign language teaching Moodle platform. If necessary, training for teachers of foreign languages in the proper handling of the new platform and testing the new platform for the needs of the educational process will continue.

The completion of the e-learning within each specialized texts should be the result of the project. The obtained materials added to the Moodle platform then will be accessible to all students of bachelor’s and engineer’s study at the Faculty of Manufacturing Technologies. We will implement the concrete results of our work in the learning process and the upcoming seminars for high school foreign languages teachers within the dissemination of the results. When teaching foreign languages thus finalizing work with the selected foreign language and specialized texts during the semester will be also tested with students. They make adjustments in assignments after finding ambiguities and shortcomings continuously. Or if there are any technical problems, they solve them with experts on technical implementation. We expect to conclude the work with themes and exercises in the foreseeable future. So after adjustments by testing they will be appropriate supplementary materials for all students of bachelor and engineer degrees in individual study programmes and branches. Students will be introduced to a different foreign language texts and prepared tasks, whether the exercises during the semester by testing.

Therefore, we added the appropriate technical study material from English texts on topics such as job application, in which we prepared to exercise typical language for talking about their work, the most used questions asked during the interview, English work on the narrative on deadline (closures), memos to employees, how to write a report, an apology or complaint letter. I suppose that currently very topical are global environmental problems in which we focused on issues close to material recycling and combustion inclusion. Given the above study programmes we could not forget about topics related to computers and the Internet, which we introduced and clarified issues - CIM, CAD, CAM, CNC. Attention was also focused on the language of computers and related formal and informal emails, complimentary language used in emails, formulation of invitations and responses to the mail. Similarly, we included here the Internet terminology, social networks, as well as we clarified the purpose and role of the concept of netiquette. Within the explanation of certain functions of the machinery we tried to point out the different types of gears and their operations, as well as methods of joining parts together through exercises. Technical materials are equally important. We examined the physical and mechanical properties of materials, plastics and nanomaterials by studying of the current issue, and then we added the correct videos or exercises. To the manufacturing process is dedicated rather extensive section. Within the traditional manufacturing processes, we approached to students drilling, milling and milling cutters, turning, cutting, grinding and shaping. Progressive manufacturing processes include, for example, electrical discharge machining, laser beam machining, electron beam machining, water jet machining, abrasive water jet cutting and hydroforming. I consider that every student of manufacturing management study programme should control issues related to their field. Therefore, they have an opportunity to become familiar with technical terminology and basic information about the company, company structure and business ethics through the appropriate technical foreign language texts. Within management they should master the concepts and the related issues related to knowledge management, change management, and financial management. Similarly, topics on which they should understand how different is leadership and management, or marketing and sales are offered to the students. Marketing strategy, direct marketing, market research and implementation, and customer service are just as much bearing on the themes in already mentioned study programme, so we have prepared a rich offer of testing exercises in the context where they have the opportunity to study and verify their knowledge of the above technical terminology. Similar issues are solved by students also within the German and Russian technical text and language.

3. Conclusion

The website for all students of bachelor and engineering study will be accessible after completing the formation of the individual courses. This page will be intensively used as a complementary form of teaching during the semester not only internal but also external students. These issues will also be available for doctoral students or other teachers of technical subject. I suggest that in the context of dissemination of these issues the workshops for language teachers from secondary vocational schools will be also included. We will emphasize the need to work with a professional foreign language texts during the course, because their students are actually potential listeners of the Technical University, which includes the Faculty Manufacturing Technologies in Presov. Teachers will be familiar with the prepared methodical-didactic processing of various foreign language topics.

Moodle thus provides a large amount of resources and opportunities that we can create a modern and efficient e-learning courses. As each sector of activity, the educational process uses information and communication technologies. The task of learning environments are particularly educational objectives and feedback from students. Educational objectives are defined by courses and teachers, not by students, who must expend effort to achieve them. The feedback is even more important. It shows to students how to move forward, where are their weaknesses, because if they did not receive feedback, then they cannot find if they are close or not close to achieving the educational goals.

Acknowledgements

This paper is supported by KEGA, contract No. 013TUKE-4/2012 „Application of E-learning in Foreign Language Teaching at the Faculty of Manufacturing Technologies.“
References