



Project financed by the European Union

RESULT 2

Daugavpils Tirdzniecības profesionālā vidusskola, Latvia

*Alexander Klimov, Māra Raubiško, Inese Celitāne,
Tajja Smāne, Galina Vodčica, Aleksejs Samohvalovs*

MODERN METHODS, TECHNIQUES AND FORMS OF TEACHING WITH THE USE OF ICT AND MOODLE PLATFORM (AN OUTLINE)

Daugavpils, 2014 – 2017

Modern education

In the era of quickly changing reality caused by development of information and communication technologies education also undergoes these changes. The aim of the changes is functioning of school in the way that its graduate is provided with skills vital for succeeding not only in personal life but also on a labour market.

Thus, in vocational training, the main pressure should be put on forming practical skills among students as well as teaching them how to solve problems in an effective and independent way; an important role in this process is put on introducing innovative solutions concerning methods and techniques of work.

Modernizing of education is not possible without the use of communicative-informative technologies. The element which perfectly fits in the process is *e-learning*, the method of teaching that makes use of any electronic media, including Internet network, but also educational platforms.



The superiority of e-learning over other methods is connected with devolving responsibility in teaching from a teacher to a student; this way a learner's autonomy is built up and the whole process becomes individualised. Such a form of gaining knowledge is the consequence of a challenge caused by quickly changing reality. Many solutions connected with this form of education successfully support traditional lessons, creating a new way of teaching called *blended learning* (the connection of typical classroom-based teaching and e-learning). The use of blended learning allows to gain appropriate knowledge and skills not only by talented students but also by those who need more support. Such approach supports individualisation of the educational process and, at the same, time helps improve its effectiveness.

It is worth mentioning that in modern long-distance education as well as in blended learning the inseparable element is *m-learning* (*mobile learning*), meaning long-distance learning with the use of mobile wireless equipment such as tablets or smartphones.

Student's activity as a key to success

The main aim of active methods of teaching is putting a student in such a situation that he/she feels the need to act the way a teacher expects them to do. The way in which a group or a teacher works, allows to learn actively, which means learning through actions and experiencing. Such approach to teaching allows not only to awaken the interest of a subject in a student but also check his/her knowledge. The main advantage of these methods is perfecting the skills which are useful not only during a lesson but also in everyday life, such as:

- ✓ communication
- ✓ openness
- ✓ ability to plan and achieve goals
- ✓ ability and resoluteness in decision making

- ✓ responsibility
- ✓ self-reliance
- ✓ ability to work in a group
- ✓ ability to organize one's own work and time management
- ✓ resistance to stress
- ✓ ability to solve problems
- ✓ creativity
- ✓ negotiation skills

Active methods of teaching include:

- | | |
|------------------------|---------------------|
| ✧ Project method | ✧ Mind mapping |
| ✧ Case study | ✧ Roleplay |
| ✧ Situational approach | ✧ Metaplan |
| ✧ Guided text method | ✧ Drama |
| ✧ Discussion | ✧ Decision Tree |
| ✧ Brainstorming | ✧ Educational Games |

The team of teachers working on the innovative method decided to use selected active methods in connection with modern information and communication technologies as well as possibilities given by the e-learning MOODLE platform. While discussing the principles of working with the method, the team focused not only on *e-learning* but also on the combination of online environment with the traditional way of conducting classes, that is, blended *learning*.

Basic assumptions of the selected methods of teaching

- combination of traditional way of teaching with e-learning,
- devolving responsibility for the process of learning to a student,
- limiting the role of a teacher to accompanying and supporting the process of learning,
- perfecting e-learning competences: creating online courses on the MOODLE platform and using them within traditional forms of education,
- preparing various materials for exercises and placing them into an online course,
- using diversity of e-learning tools and methodologies in the process of learning,
- working on the MOODLE platform with the use of various devices: PCs, laptops, smartphones,
- transition of students' approach to the way of learning- thanks to the mobility of the platform they can work on it outside the classroom as well as their home,
- four ways of teacher-student interaction: 1. different rooms at different times; 2. different rooms, the same time; 3. the same room, but at different times; 4. the same room and the same time,
- introducing the innovative method of teaching makes the process of education qualitative, competitive, more effective and complete,
- thanks to MOODLE platform, education becomes more accessible to wider audiences,
- while working with the platform, students develop abilities of searching, interpreting, comparing, critically evaluating, discussing, expressing and justifying their opinion; making their own choices and implementing them in their lives.

„Brainstorming” – it is an easy way to generate ideas in order to solve a problem. During a brainstorming session participants easily exchange ideas as they arise, so that everyone can work out their own point of view based on others’ ideas. “Brainstorming” is an effective method when it comes to discussing controversial issues. It is also a great way to involve non-confident students into a discussion. A great advantage of this method is the fact that students can generate numerous ideas in a short period of time, which may be a base for working out solutions to a problem.



Project method – the main objective of this method is to acquire and apply new knowledge by students to find a solution to a problem in an active way. To achieve such a result, it is necessary to teach students to think independently. Thanks to this way of thinking students develop the ability to predict the results of their activities and possible impacts on different possibilities solutions. A great advantage of this method is the fact that students acquire the ability of a lifelong learning, which is very useful in their future personal and professional development.

Case study – work with this method starts with presenting a problematic situation or dilemma to students. Then students, working individually or in groups, work out the best solutions to the problem. It is important that while presenting the effects of their work on the forum they can defend their point of view. The last stage of working with this method is summarising and evaluating the learning results made by students.

This method is based on a stable model of a problematic situation that may occur in a real life. It reflects the range of knowledge and skills that students need to get so that they can deal with the situation successfully.

Blended Learning - numerous benefits

- ☑ **Accessibility of place and time** – a student has access to educational materials placed on e-learning platforms from any place, without additional software and in any time;
- ☑ **Individualization of time and learning pace**, adjusted to individual needs and potential of a student – students learn in any time chosen by themselves and in the best possible circumstances (on the contrary to a classroom where the number of people, noise and time limit significantly inhibit effectiveness); a student has the possibility to transform acquired issues while a teacher may give him appropriate instructions;
- ☑ **Diversity of learning** – thanks to the use of multimedia and non-verbal presentation of the material – online courses allow place attractive and dynamic materials, thanks to which the process of education becomes much more interesting.
- ☑ **Simplicity of updating and supplementing materials** – a teacher creating a base for electronic materials can easily modify and upgrade it, on the contrary to traditional materials, after upgrading the materials are immediately accessible.

- ✓ **The possibility of current analysis of students' achievements** – tools for distance learning make analysing of students' achievements easier by generating summaries and make it possible to give a clear graphic presentation of outcomes of various activities. A teacher responsible for the course has current preview participants' activity and may additionally motivate them by sending them messages within the system or by oral information during meetings outside online environment.

There are drawbacks, but there is a way to avoid them

Distance education means not only advantages – there is also a risk of some problems. However, earlier preparation for their appearance and appropriate planning of the learning process will allow to minimise or avoid them.

- ✗ **The lack of sufficient motivation and organisation of students' work** – a student's autonomy in distance education may lead to inadequate distribution of his work and, therefore, his failure to do the task; it is highly probable that a teacher's proper involvement and motivation will allow to avoid such situations.
- ✗ **Making education informal** – in this form of education there might be too many informal situations, characteristic for online environment. The best solution is to get students acquainted with the idea of netiquette as well as to set principles to follow during such form of work.
- ✗ **The feeling of solitude** – the lack of personal contact with a teacher and other students may lead to the appearance of negative feelings connected with distance education; a teacher conducting e-learning can not only effectively prevent such situations arranging as many group activities as possible, situations in which a student has the possibility to express his opinion about a problem in a group, but also create a place where students can express their opinions about topics which are not associated with the course.
- ✗ **Necessity of proper equipment and Internet access** – nowadays the problem seems to be rather minor, a possible solution might be the use of library equipment at schools or Internet cafes.
- ✗ **High cost of professional platforms** – highly expanded e-learning platforms may mean high operating cost; however, there are **free platforms** on the market (e.g. **MOODLE**). The current version of the platform has got a modern image and allows to propose many interesting solutions that will support their education.

Selected resources and activities on MOODLE - make use of them

Resources:

- **File:** can be added as a resource which is accessible from the course level; a teacher conducting the course may share files in a form of a lecture presentation or materials supporting classes.
- **Folder:** allows to display many files in one place reducing the need to scroll up/down the page. This source will make it easier to organise the files which are placed by the teacher.
- **Page:** is created with the help of a text editor; may contain text, graphics, sound, video, links to other webpages and built-in content, e.g. Google Maps or You Tube. However, when a big number of contents is created, it is recommended to use the module of a book instead of a single page.
- **Book:** this resource is a simple and comfortable way to present many pages of contents within the course. It makes it easier to divide bigger parts of information into shorter ones and easier to remember. A student has the possibility to print the whole book or a chapter.
- **URL:** it allows to add www link not only to the home page but also to documents or pictures placed on a website. The page may be displayed in an embedded form, which will reduce the need to open new windows and introduce mess to the course.

Activities:

- **Lesson:** it allows to introduce teaching contents in an interesting on many pages. In contrast to a book, a teacher can limit transition to the next page by a short question which checks understanding of contents by a participant of the course. Depending on the structure of the teaching material the navigation can be simplified or more complex.
- **Forum:** this module may appear as the most important –most discussions take place here. Depending on the needs, forums can have various structure and make it possible to assess every post by other participants and a teacher. Posts may include attachments and authors have the possibility to analyse their statements with the use of a text editor. Subscription of new posts may be imposed by the author- it is a useful rationalization of a discussion.
- **Database:** this module makes it possible for the participants to create, save and search through prepared database. The format and structure are almost unlimited and database may include pictures, files, addresses, numbers and texts as well.

- **Surveys:** the module contains three types of instruments for rating and stimulating education in online environment. A teacher may collect data about a group and reflect on his own methods of teaching.
- **Questionnaire:** it allows to create polls containing various types of questions thanks to which it is possible to collect data from the participants of the course. The tool is irreplaceable when it comes to diagnosis of needs and evaluation of courses.
- **Quiz:** it allows to create tests containing multiple choice questions, true/false, matching etc. A great number of options to get a credit for the quiz and to display it allows a teacher to adjust the same quiz to the needs of different groups of students.
- **HotPot (Hot Potatoes) Module:** allows teachers to create interactive activities on the MOODLE platform. They can be crosswords, quizzes, tasks with gap filling and others. In this activity, it is possible to connect exercises which were prepared earlier.
- **Workshop:** allows to collect, browse and make a mutual review of essays sent by the students. In this module, a student gets two grades: for handing in his work and for reviewing essays of other participants. Both grades are visible in the register. Workshop is a very useful tool to use in case study method.
- **Glossary:** it helps participants to create and use a set of definitions, like in a dictionary. If the words or expressions placed in the dictionary appear anywhere in the contents, they can be automatically exchanged into links to the dictionary entry (automatic definition linking). The entries can be doubled and a teacher can assess them.
- **Task:** it allows a teacher to communicate, collect students' essays, evaluate them and give grades. Tasks may be sent as files in any format (text, multimedia, pictures, etc.). on assessing the essay a teacher can comment on it and send files (e.g. a student's essay which has been corrected or an audio file with the feedback).
- **Wiki:** it gives the participants a possibility to add and edit the set of connected pages; it can be created individually or as a group. The history of each version of "Wiki" is saved during its creation; a participant has the possibility to reproduce it. "Wiki" module can be used to:
 - create instructions for groups,
 - cooperate while editing books, articles, etc.,
 - create individual register of study,
 - work on an educational project.

Evaluation of students' achievements in work with MOODLE

The aim of evaluation of students' achievements is motivating each student to acquire necessary knowledge and skills needed in personal, social and professional life. It is very important to promote students' responsibility for results achieved in the process of learning and to motivate them to improve their educational achievements through self-assessment. The next task is to do a correction of the process of learning to improve students' educational accomplishments.

Evaluating students' achievements:

1. MOODLE programmed scale,
2. Grading system made by the teacher.

It is possible to choose the method of evaluation of students' achievements knowing the educational aims and the aim of the task.

Techniques of evaluation and assessment:

- ranking evaluation,
- checklist.

Ranking evaluation is used when evaluated aspects or quality of the results range from low to high, from bad to good, from poor to excellent. If the evaluated aspects or quality of the results are abstract and can be varied by the levels, then the ranking evaluation is the most suitable. This method is widely used when evaluating the various learning and training success.

Checklists are used for evaluation the quality of the results of students' work. Checklist is a list of activities where the observer made notes. It can be a short and simple list of some elements, but can also be a complex monitoring system with precise definitions of expected behaviour.



In whichever case, while creating a checklist, a couple of things are taken into consideration: work analysis, aims, analysis of tasks, a pilotage observation of selected students is carried as well.

Summing up...

E-learning platform is a perfect place to create good conditions for long-distance learning for students, taking into consideration not only complete long-distance learning but also connection of traditional education with online environment. Having so many possibilities to use communication and information technologies a modern teacher, searching for innovative solutions, has a great chance to succeed in the process of improving effectiveness of their work. The method of blended learning and e-learning can be used in teaching practically every subject- everything depends on creativity of a person who conducts the process of teaching. Placing only part of education on the platform creates many positive phenomena:

individualisation of the process of teaching, higher level of student's autonomy, increasing IT competences, these are only some of them. Skilfully conducted education of long-distance and blended learning will bring many benefits not only to students but also teachers, however, some risks connected with it should be taken into consideration as well. Proper preparation and planning of the process will allow to minimize or completely avoid problematic situations.

Full description of the innovative method of teaching with the use of information and communication technologies as well as mobile technologies can be found at the project platform at <http://ekonomik-lomza.moodle.org.pl>, in "The Method" section.

References:

1. Method Description at:
<http://ekonomik-lomza.moodle.org.pl/mod/resource/view.php?id=492>
(access: 25.02.2017)
2. Pictures created by Freepik, at <http://freepik.com>