EDUCATIONAL INTEGRATING PROJECTS IN THE CREDIT SYSTEM OF EDUCATION

I.N. Kurinin, V.E. Marfina,
V.I. Nardyuzhev, I.V. Nardyuzhev

Chair of computer technologies
Peoples' Friendship University of Russia
Miklukho-Maklaya str., 6, Moscow, Russia, 117198

This article describes a method of interactive learning based on the educational integrating projects. Examples of the contents of such projects for the disciplines connected with studying information and Internet technologies and their usage in management are presented. The offered projects meet requirements of educational standards of the new generation and spend a considerable part of lessons' time, using methods and forms of an interactive learning. They enrich traditional types of studies, changing a role of the teacher and expanding borders of independent work of the student. A special method for grading educational achievements of the students who are carrying out such projects in the credit system of education is recommended.

Key words: student, educational standards of the new generation, methods of interactive learning, educational integrating projects.

Nowadays traditional methods of teaching (such as lectures in the computer class, practical laboratory work on computers, computer testing) do not guarantee that students will acquire all necessary competencies prescribed by the educational standards of the new generation [1; 2]. There are several reasons for it. The Internet has become the main source of information today, overtaking teacher's functions in teaching and learning process. In cases when students choose courses to study by themselves (like within the credit system of education), their success depends on their hard work and education that is engaged with applied tasks taken from life experience. Students learn to work individually by processing a lot of information and applying their knowledge, skills and abilities in practice. Computer-based information and distance education have facilitated the learning process making it more interesting and adaptable. There are new opportunities having been worked out in the learning process (for example, with the help of the Internet you can get all the information about the discipline you study, you can test yourself, make use of media resources, etc.). In the information society information, cloud-computing and Internet-based technologies serve the main tool in developing informational culture and obtaining necessary cultural and professional competencies.

Today the learning process is being greatly developed by the interactive teaching and learning techniques. This is internationally recognized to be the most effective and successful approach in teaching and learning process [3—5]. Interactive education presupposes student interaction. Number of lectures is limited by spending more time on seminars, business role games, learning projects. Teachers today work out interactive projects and tasks to be discussed as major issues within groups, consult students during classes and follow the planned schedule. Students are supposed to interact

with each other, take a more active part in the learning process, be able to take decisions and act individually. They exchange information, model situations but stick to the reality in case of business negotiation management and do their best to solve case studies. While fulfilling the tasks, students (individually or within the working groups) grasp the knowledge by being active and completely involved within the learning process. They search for needed information by themselves and learn to master new information processing technologies.

Implementation of interactive learning methods within the system of higher education has become one of the most demanded tendencies that help to develop students' training rationalization process and meet the demands of the next generation's education standards. For instance, according to the education standards worked out by Moscow State University within different fields of studies, use of active and interactive learning techniques and implementation of innovative technologies are urgent in order to develop the required competencies. Bachelor's degree programs include project works, participation in business and role plays, psychological and other trainings, debates, round-tables, use of computer simulators, distance education tools, original courses worked out by University-based research group at MSU Schools of Sciences. Master's degree programs include seminars in an interactive environment, discussions, computer simulators, business and role plays, case studies, psychological and other trainings, debates, etc. along with extra-curriculum studies aimed at developing professional skills of students. Students will also meet the representatives of Russian and foreign companies, governmental and non-governmental organizations, attend workshops conducted by experts and qualified professionals. One of the most practical ways of developing professional competencies is attending workshops that would last for 2 semesters.

Total number of classes to be held in an interactive atmosphere depends on the field of studies and students and shall take over 30% of classes. Moreover, traditional lecture studies should not occupy more than 30% of the whole time set for auditorium work [2].

Interactive education today is best illustrated on the official website of Centre of Interactive Education Technologies at Moscow State University [http://ciot.msu.ru/about] and in the materials of All-Russia Conference "Interactive education" [3]. There is a wide range of interactive teaching methods and techniques. Teachers can use traditional interactive teaching methods (round tables, brainstorming, business plays, case study, workshop sessions, trainings, dialogues, discussions, lectures with elements of discussions, real case studies, debates) and new methods based on the use of informative technologies and the Internet, distance education technologies, computer-based testing (in class and in distance), e-mail, educational websites, video calls, webinars and e-books.

This article illustrates our experience in combining five most popular interactive teaching methods (brainstorming, master classes, webinars, education and research seminars) and one new specially worked out method (educational integrated projects) that is based on information, cloud-computing and Internet-based technologies. The last is the key method and, thus, it will be illustrated in details.

Educational project is also a method when students work on individual or group projects under the supervision of their teachers. It fulfills the following tasks: 1) teaching students to work independently and apply the obtained skills in case studies solving; 2) searching and collecting required information on the Internet, analyzing it, drawing conclusions; 3) filling in online forms, websites, etc. [3; 4].

Effectiveness of educational projects can be achieved by integrating: 1) knowledge, skills and qualifications in different fields in order to achieve success in solving complicated but urgent cases in research and work (for example, cases within the process of informatization and management, philology, linguistics, sociology, culture and arts, etc.); 2) different educational methods (online education, distance education techniques); 3) information, cloud-computing and Internet technologies as means of an exact case solving and as a subject of studies.

This method can be called a method of "Educational integrating projects" (EIP).

EIP are used in work with those students who obtain excellent basic computer skills (within the course of "Computer studies") and are prepared for modern technology studies engaged with applied management, technical sciences and/or humanities.

EIP can be carried out individually or in groups and can take place within different period of time (one or two semesters). EIP help to develop computer skills by using information technologies and case studies solving. Tasks are given depending on the field of study. There might be such tasks as operating a website on a topic, working out a business-plan for small businesses, creating a presentation on urgent methods and techniques of solving case studies. Generally, some examples from life edxperience are elaborated within EIP (about 300). Students are expected to search for the required information on the Internet, to analyze, synchronize and draw conclusions of how the problem could be solved in reality. Some of the tasks are for individual work. Others are intended for group work. Groups consist of 3—5 students. Students work with case studies in computer classes (in internet cafes, in dorms, at home), contacting each other and socializing, as a rule, they do things in distance by sending e-mails to each other or chatting on education portals.

In the end of the course students might make a video presentation, write a paper, present a website or a number of Internet pages. The results of the projects are reported and demonstrated to the class on education seminars.

Internet is the main source of information in EIP. Information and Internet technologies serve perfect tools to solve any problem a student comes across today. EIP worked out for education courses in computer technology use in research and education (management, philology, linguistics) help a student to improve obtained within the learning process skills and professional competencies.

Integration of information, cloud-computing or Internet technologies into teaching process gives a real opportunity to students to apply the obtained knowledge at a later stage.

Overall access to EIP provides students with motivation to proceed their education after the studies. Electronic format of education and permanent access to the Internet helps students to plan their time and period of studies making it more interesting for themselves.

There are three types of EIPs for Bachelor's degree program students ("Information technology management").

1. Information project that includes studies of language of requests and algorithms of work with Internet search engines, data collection, computer translation and data analysis on a subject or education problem, summarizing, class presentation. As a result, a new developed website can be presented.

2. Case studies project that is focused on case studies solving and receiving definite solutions.. In the end, for instance, students present a created website that serves as an e-library for sociologists, philologists or linguists.

3. Creative project when a final result is known but the structure or ways of its realization are being developed in the working process. For example, a new photo portal.

Master's degree program (for example, course in "Computer technology in science and education") will also include the fourth level of EIP, i. e. research and development project that will display results of students' research (problem setting, claiming hypothesis, choosing rational or best way of achieving the goal, experimental method). Students are expected to hand in a report, an article to publish, a created website or an education portal.

Assessment system is a process of grading student's studying results according to the exact project carried out. Student's knowledge, skills and abilities obtained within the project are being assessed. Following methods are recommended to be applied together: 1) Formal method of point-rating system; 2) Computer-based testing method (online distance or class based). 3) New ways of assessment when individual work of a student is taken into account; 4) E-journals along with individual student progress portfolio that would help to count knowledge, skills and abilities of a student (i.e. that displays their competences).

CONCLUSION

1. The offered EIPs meet the demands of educational standards of the new generation, i.e. switch to multimedia interactive teaching.

2. EIP changes the role of teachers. They still provide students with selected materials during the lectures. They supervise research work of students within the EIP. During students' presentations of their fulfilled EIP, teachers give recommendations to students where they estimate students' work, their involvement in the project and knowledge of information, cloud and Internet technologies.

3. EIP don't fall out but enrich traditional classes. They stimulate student's interest in studying and improve learning process and develop working skills (group or individual work), motivating students to be active, initiative confident and independent. Students develop such skills as: to search, collect, analyze, evaluate, organize, present, deliver information using new information, cloud computing and Internet-based technologies, that speak about their computer and professional competence.

4. Implementation of interactive teaching methods is extremely time-consuming. It takes much effort on teacher's part to work it out, as well. Another issue of this method is a lack of qualified professionals who would engage it within the educational process.

REFERENCES

[1] Archive of federal state education standards of higher professional education. — URL: http://www.edu.ru/

[2] Education standards, worked out by Moscow State University after Lomonosov. 2011. — URL: http://standart.msu.ru/main

[3] Proceedings of the 3rd and 4th Conferences «Interactive Education» held by the Center of Interactive Educational Technologies in Lomonosov Moscow State University. — URL: http://ciot.msu.ru/events/interedu-iii, http://ciot.msu.ru/events/interedu-iv

[4] *Terskikh M.V.* Interactive methods of education. Bachelor's degree program «Advertising and public relations» // Pedagogical education in Russia. — 2013. — № 1. — URL: http://journals.uspu.ru/attachments/article/323/

LITERATURA

[1] Arhiv fajlov federal'nyh gosudarstvennyh obrazovatel'nyh standartov vysshego professional'nogo obrazovanija. — URL: http://www.edu.ru/

[2] Obrazovatel'nye standarty, samostojatel'no ustanovlennye MGU im. M.V. Lomonosova. 2011. — URL: http://standart.msu.ru/main

[3] Materialy 3-j i 4-j konferencij «Interaktivnoe obrazovanie» Centra interaktivnyh obrazovatel'nyh tehnologij MGU im. M.V. Lomonosova. — URL: http://ciot.msu.ru/events/interedu-iii, http://ciot.msu.ru/events/interedu-iv

[4] *Terskih M.V.* Interaktivnye metody obuchenija bakalavrov po napravleniju podgotovki «Reklama i svjazi s obshhestvennost'ju». Pedagogicheskoe obrazovanie v Rossii. — 2013. — № 1. — URL: http://journals.uspu.ru/attachments/article/323/

УЧЕБНЫЕ ИНТЕГРИРУЮЩИЕ ПРОЕКТЫ В КРЕДИТНОЙ СИСТЕМЕ ОБУЧЕНИЯ

И.Н. Куринин, В.Е. Марфина, В.И. Нардюжев, И.В. Нардюжев

Кафедра компьютерных технологий
Российский университет дружбы народов
ул. Миклухо-Маклая, 6, Москва, Россия, 117198

Описан метод интерактивного обучения, основанный на учебных интегрирующих проектах. Представлены примеры содержания таких проектов для дисциплин, связанных с изучением информационных и интернет-технологий и их применением в управлении. Предложенные проекты удовлетворяют требованиям образовательных стандартов нового поколения проводить значительную часть учебных занятий со студентами, используя методы и формы интерактивного обучения. Они дополняют традиционные виды учебных занятий, меняя роль преподавателя и расширяя границы самостоятельной работы студента. Рекомендован подход к оценке учебных достижений студентов, выполняющих такие проекты в кредитной системе обучения.

Ключевые слова: студент, образовательные стандарты нового поколения, методы интерактивного обучения, учебные интегрирующие проекты.