

Problem of Using Innovative Teaching Methods for Distance Learning Students

Olga V. Borisova^a, Dinara G. Vasbieva^b, Natalya I. Malykh^c,
Sergey A. Vasnev^d and Jana Bírová^e

^aFinancial University under the Government of the Russian Federation, RUSSIA;

^bFinancial University under the Government of the Russian Federation, RUSSIA;

^cThe Russian Presidential Academy of National Economy and Public Administration (RANEPA),
Institute of Public Administration and Management (IPAM), RUSSIA;

^dThe Russian Presidential Academy of National Economy and Public Administration (RANEPA),
Institute of Public Administration and Management (IPAM), RUSSIA;

^eComenius University in Bratislava, SLOVAKIA.

ABSTRACT

This paper investigates some issues of students' training at the university. The key methods of the study are conversations, observations and an experiment which allow to verify the results. The active learning methods, the appropriateness of using them for distance learning and the problems arising from such methods are considered. We find robust evidence that the modern teaching methods for distance learning students is inefficient and we suggest that a special role in working with the modern computer-assisted learning software should be given to the teacher whose function is to monitor the implementation of tasks, the learning process, time and quality performance of tasks. Furthermore, within this e-learning platform the teacher has the ability to communicate with students by emails. One of the important advantages is that the teacher can choose the training program for students according to the curriculum and specialization of the course and use the tools that will best contribute to the achievement of learning objectives.

KEYWORDS

Innovative teaching methods; distance learning;
distance learning students; forms of education

ARTICLE HISTORY

Received 15 September 2015
Revised 10 November 2015
Accepted 22 February 2016

Introduction

State of the problem

The use of innovative educational technology programs in teaching students is one of the requirements for state accreditation of higher education institutions

CORRESPONDENCE Olga V. Borisova ✉ jalo-jalo@mail.ru

© 2016 Borisova et al. Open Access terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>) apply. The license permits unrestricted use, distribution, and reproduction in any medium, on the condition that users give exact credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if they made any changes.

in Russia which was defined by the federal state educational standards for higher professional education. The application of a competency-based approach that was set in the standards fixed the requirements to use interactive methods in the training process (Borisova, 2014). This fact requires all Russian universities to apply innovative technologies in their activities; therefore, the study of innovative methods and techniques of their implementation in higher education institutions is a burning issue of pedagogy.

The aim of this study was to identify best practices related to the problems of using innovative teaching methods in higher education institutions. Within the broad theme, the research had a number of specific objectives:

- to examine innovative methods of training students in higher education institutions;
- to look into the problems arising from the use of innovative teaching methods in higher education institutions.

This research will determine the number of problems encountered by university educators when teaching distance learning students.

Literature Review

The works of some scholars laid foundation for much research focusing on issues of innovation (Kokurin, 2001; Fatkhutdinov, 2008; Utkin, Morozov & Morozova, 1996), including the educational environment (Smolkin, 1991; Mukhina, 2013). A number of studies are devoted to the problems arising from training distance learning students (Maksimov, 2012).

The works of these researchers have made significant contributions to the development of the learning process. They allow to define the role of a modern teacher in the learning process and identify the range of urgent issues that need to be addressed in the future, which is the subject of our study.

Materials and Methods

During the study the following methods were used:

- theoretical methods: analysis, synthesis, generalization, comparisons, logical method and classification;
- empirical methods: observation, description, measurements, comparisons and experiment.

Experimental work took place in several stages.

At the first stage of the research the concept of innovative methods used in higher education institutions was reviewed, the classification of innovative methods of teaching students was presented.

At the second stage active forms of classroom activities with the university students were studied and research into the proportion of students attending online classes regularly and passing final exams was done. As a result, the problems faced by the university educators when teaching students, including distance learning ones were identified.

The purpose of the third stage was to suggest ways of improving the quality of training university students enrolled in distance learning programs or engaged in blended learning environment combining face-to-face learning with distance delivery system.

Results

The concept of innovative teaching methods

At the first stage of the study we will consider the concept of innovative methods used in universities, the main attention being paid to distance learning.

A large number of research works are devoted to the innovative teaching methods. However, they define the concept of innovation rather than innovative methods of teaching students.

The works of a number of scholars identify the term "innovation" with novelty and improvement (Gryaznova, 2004). Some scholars consider innovation as a process of making a new product, technology, innovation in the field of organisation, economy and production management (The concept of innovation policy in the Russian Federation, 1998; Kokurin, 2001; Fatkhutdinov, 2008). The others believe that innovation is the process of the introduction of new products, components, approaches which are qualitatively different from the previous analogues (Raizberg, Lozovsky & Starodubtsev, 2006; Utkin, Morozov & Morozova, 1996).

From the above mentioned perspective, it is necessary to argue that innovative methods are methods which are based on contemporary research and information technologies that improve the quality of training students and develop their creativity and independence in decision-making. They include case study method, problem- and project-based learning, research methods, trainings which foster students' autonomy, critical and creative thinking skills (Borisova, & Klimova, 2015).

According to some experts in the field of higher professional training, innovative methods can be implemented both in the traditional classroom setting and in distance learning. The latter has been given special attention in recent years.

Pros and cons of distance learning

Nowadays, depending on the features of the organisation of training, the forms of learning are divided into full-time, evening classes, correspondence and external studies. In practice, Russian universities use distance learning for students enrolled in correspondence and external studies. However, today they develop programs combining different forms of learning. For example, a combination of a face-to-face classroom activity with the online instruction, referred to as blended learning, helps educators increase student achievements by providing an individualized and engaging learning experience for every full-time student and those who attend evening classes.

Distance learning seems to be attractive as it implies training using interactive electronic information delivery, including information and communication technologies (ICT) applications (Vasbieva & Klimova, 2015). This form of learning has been used quite successfully for several years at Financial University under the Government of the Russian Federation, which allows the university to offer students a choice of a wide range of academic disciplines across different majors. The teacher communicates with students by means of telecommunication technologies, regardless of their location.

The authors revealed a number of advantages of distance learning which are as follows:

- an increase in access to education for those who otherwise have no other opportunities due to work, family or physical limitations
- greater flexibility for scheduling learning. (Students can determine time and place of "classtime");
- greater flexibility in location for study. (Students can engage course at home or work or on campus or at a library);
- the potential to equalize access to education;
- a modality of instruction better suited for certain learners;
- possibility to study for two different degrees in parallel;
- cost-effectiveness;
- broad audience coverage;
- opportunity to develop technology competencies for instructors and learners;
- centralized resources can produce higher quality materials for distribution;
- the internationalization of learning opportunities;
- change in the teacher's role (from a teacher to a mentor or a consultant);
- greater learner-instructor interaction;
- openness.

At the same time like any form of training, distance learning has a number of drawbacks related to:

- the lack of face-to-face contact and communication between the teacher and students, and team work;
- the lag time between student input and feedback (Time lapse between need for learner support and resolution);
- occasional internet provider downtime;
- student must be more active and self-directed in learning environment (Depends on individual motivation and initiative);
- occasional feelings of isolation (Potentially less group support for learners leading to isolation and possible non-completion of program.);
- instructional design for group activities and group interaction more demanding on the instructor;
- demands large effort and cost to develop appropriate materials;
- demands large effort to create and maintain the technological infrastructure
- labor-intensive training courses for distance learning;
- high demands on the technical training facilities (computer with a certain operating system, the availability of the Internet);
- the need to create individual psychological conditions;
- a lack of practical knowledge;
- failure to have 100% control over students' knowledge (Maksimov, 2012).

It should be noted that distance learning will not work if the university does not have a well-constructed electronic learning environment including computer-supported collaborative learning, electronic learning resources and learning administration system.

Active and interactive learning instructional strategies used in higher schools

Nowadays, most universities implement competency-based approach by using active and interactive learning instructional strategies which include computer simulations, business meetings, role-plays, case studies, psychological and other training (Vasbieva & Kalugina, 2016). The combination of these techniques with students' self-study makes it possible to develop professional skills, the state standards requiring interactive techniques should be at least 20% of classroom activities. However, this is partly applicable to the distance learning programs because the classroom activities are minimized.

The university can currently apply two models: passive and active learning. Passive learning is a classic model of the Soviet scientific school where a student acts as an "object" of teaching and the teacher is a lecturer who delivers learning materials to students through lectures, references to textbooks and training toolkits. The main teaching methods in the passive model are a lecture in the form of presenting material as a monologue to students, an explanation of the material during workshops, reading special professional literature, slideshows and classroom assessment. However, this training model does not involve the implementation of creative tasks by students and face-to-face contact in the classroom. This scheme is used for training distance learning students. A student acts as a "subject" of the education process in the active model, which stipulates students' self-study and encourages cognitive activity. It is based on creative tasks and teacher's dialogue with students. The core of this model is creative thinking. Most of the time is spent on self-study, creative and problem-based assignments, discussions, etc. Recently the time for students' self-study has been increased. The classification of these methods, when used to train distance learning students, as well as the problems encountered by teachers are presented in Table 1.

Table 1. Classification of active learning methods and problems of teaching methods for distance learning students

Method	Principle of method	Problems
<i>Traditional (non-simulated)</i>		
Discovery Conversation	scenario analysis, as well as decision-making based on intuition, analogies, experience, imagination, allowing students to set and solve problems, for which formal algorithm and ways of solving problems are not known	poorly equipped universities which result in monologues; poor theoretical training of distance learning students
Lecture- Conversation	the maximum inclusion of students in an intense conversation with the lecturer through the skillful use of a dialogue	
Problem-based learning	the process of acquisition of teaching information through problems solved in class	
Lecture- Discussion	the process of discussion involving students' answers to questions and a free exchange of ideas in the intervals between logical sections	

Table 1. Classification of active learning methods and problems of teaching methods for distance learning students (*continued*)

Lecture-Provocation (Lecture-preplanned errors)	a lecture at which the presence of logical, behavioral paradigm errors in concepts and categories is announced in advance	
Workshop	the form of classes involving discussion of prepared materials on a particular topic	some technical problems, poor theoretical training, time limits
Practical classes	the form of organisation of the learning process which leads to the development of practical skills	
Research classes	the form of classes involving research on the issues that arise in the classroom and discussion	problems of teacher-students relationships; the lack of equipment in most universities needed for group discussions
Computer-aided learning	self-study and individual study on a pre-designed training program with the help of special learning tools	alignment of the time for learning with the State Standards
Work experience internship	the form of study within the organisation where students learn how to use knowledge and skills gained at university	
Independent study activities (literature)	the main way of mastering educational material in their spare time after the compulsory course	the lack of time spent by the teacher on supervision
<i>Unconventional (simulations)</i>		
<i>2.1 non-role playing:</i>		
Case-Study	this method combines many ways and means and is used when a particular method does not help quickly and effectively achieve the goal in the existing conditions	the lack of equipment needed for team work; the limited time for the real time training; labor-intensive process of preparing materials for classes
Group training	any process of acquiring knowledge, skills and behavior, which involves more than two people	
Action under the guidelines	a method of training involving classroom games, containing the rules, instructions and guidelines, setting the procedure and the method of execution or implementation of particular work	
Group thinking activities	a method of training that is associated with the activation of thinking activities system aimed at solving any problem	
<i>2.2 role-playing</i>		
Project method	<i>a method of projects and technology of game design</i>	
Business play	a method to simulate the work process or to simulate certain situations	

Source: Data from the Authors and A.M. Smolkin (1991).

It should be emphasized that in recent years these methods have become prevalent in a higher school when teaching special academic subject areas, but in distance education they are partly used due to the wide range of issues highlighted by the authors.

The course and results of the experiment

To investigate the level of students' training, a group of distance learning students participated in the study. During the learning process they watch video lectures recorded by the lecturers in the number of hours stipulated in the curriculum. The difference in the number of hours for lectures and practical classes between full-time students and extramural department students on the basis of distant education is significant. The distance learning students have 75% less face-to-face classes with a teacher than full-time ones. It should be noted that video lectures are more informative than those in the classroom, because students do not ask questions that the lecturer has to consider in more detail. However, there is a problem when the student cannot understand some issues at all. The students can watch video lectures any number of times, which improves their learning. Besides lectures the distance learning students have practical classes which are also 75% less the number of hours than those stipulated for full-time students. The rate of learning material in practical classes by the distance learning students is lower. This is due to the fact that some issues of the lecture material remain unclear, the students do not always have the opportunity to attend classes regularly because of their jobs or technical failure and others. As a result, most of the materials are given for self-study of the academic subject areas. It is necessary in this connection to develop assignments, stimulating students' cognitive development. The study conducted by the authors show that none of the 22 extra-mural students worked effectively as a team. The distance learning students follow the same trend. These students are used to working and carrying out projects individually, which is due to the fact that there is no possibility of teamwork.

The curriculum also stipulates tutorials on the academic subject area whose number of hours is about 70% of lectures. They are given in the form of webinars which make it possible for students to ask questions about the issues of the course subject they are interested in. Our experience shows that Russian students ask more questions on the learning process rather than on specific issues of the course subject, which is not effective in terms of the learning process. The students pass the end-of-term test or exam in the form of test. Before the final test, they can take practice tests and write a test. In this case, their exam or end-of-term test results might be improved pro rata with the assignments done correctly.

Three groups of distance learning students from different universities were selected to participate in the study. Attendance rates for groups are presented in Table 2. Attendance was determined based on the fact that the student is enrolled in a special training program.

Table 2 and Table 3 show that 28.57% of students from group 1 and 22.73% of students from group 3 linked and communicated with the teacher at fixed time, whereas 100% of students from group 2 were present in real time practical classes. The proportion of students in groups 1 and 3 linking and communicating with the teacher during tutorials is higher than 10%, but the students from

group 2 attended less tutorials than practical classes. Groups 1 and 3 saw a significant increase in the number of students passing practice tests and final tests (end-of-term test, exam). In this case more than 75% of students from both groups met a deadline and passed their final tests, whereas all the students from group 2 did their practice tests and passed final tests except for one student who failed his final test.

Table 2. Online class attendance rates for students in the discipline (people)

Group	Number of people	Lectures	Practical classes	Tutorials	Practice tests	Final tests (end-of-term test, exam)
1	28	-	8	11	26	24
2	14	-	14	13	14	13
3	22	-	5	7	17	16
Total	64		27	31	57	53

Table 3. The percentage of students attending online classes and passing their exams (%)

Group	Practical classes	Tutorials	Practice tests	Final tests (end-of-term test, exam)
1	28.57	39.29	92.86	85.71
2	100.00	92.86	100.00	92.86
3	22.73	31.82	77.27	72.73
Average	42.19	48.44	89.06	82.81

The study shows that groups 1 and 3 have close results, but data of group 2 is significantly different.

Table 4 reveals the findings for the control group (group 4) where there are 28 students.

Table 4. Online class attendance rates for students in the discipline

Group	Practical classes	Tutorials	Practice tests	Final tests (end-of-term test, exam)
Absolute measure, чел.				
4	6	2	28	25
Relative measure, %				
4	21.43	7.14	100.00	89.29

Table 4 shows that the attendance rate for practical classes is below average by 20.76%, but at the same time is slightly different from that for groups 1 and 3. The attendance rates for tutorials in control group 4 is below average by 41.29%, which is significantly lower than those for groups 1 and 3. As to passing practice tests, their results are above average by 10.94%, and final tests results are above average by 6.47%.

Therefore, despite the large variation, most groups tend to spend much time on developing practical skills in the discipline and real time communication with the teacher. However, the results of students who have met the deadline and passed practice tests and final tests are high. The average marks for the tests are shown in Table 5.

Table 5. The average marks for the tests (% of students)

The average mark per group	Practice tests	Final tests (end-of-term test, exam)
5	36.00	34.78
4	44.00	56.52
3	20.00	8.70

The average score obtained by the distance learning students is higher than that of full-time students. However, a comparison of the students' performance on the State exam allows the authors to conclude that the lack of control over students during the practice test and final test makes it possible for them to take the help of the third parties or reference books. This significantly distorts the test results.

Discussions

The use of modern active learning methods by distance learning students may be efficient provided that there are special electronic learning platforms, and new training programs. This will improve the efficiency of the students' study, the rate of learning material and partially develop the skills to work in a team. At the same time our study showed that these platforms are being developed in the Russian Federation and actively used by the largest federal universities.

We consider that open source web-based e-learning platforms should be an engaging and innovative learning experience, which will allow students to enjoy learning anywhere with an internet connection, at their own pace, and take advantage of learning with business and career specific supplemental content.

A special role in working with the modern computer-assisted learning software is given to the teacher whose function is to monitor the implementation of tasks, the learning process, time and quality performance of tasks. Furthermore, within this e-learning platform the teacher has the ability to communicate with students by emails. One of the important advantages is that the teacher can choose the training program for students according to the curriculum and specialization of the course and use the tools that will best contribute to the achievement of learning objectives. The main difficulty lies in time management: the students are not always willing to work systematically and regularly with the platform and monitor statistics of their self-study.

Conclusion

The study showed the need for the use of innovative teaching methods in higher education institutions, which is one of the requirements of the State educational standards. The use of innovative teaching methods will equip students with the

skills that they will need for their practical activities. The authors come to the conclusion that active learning methods are now rarely used in teaching distance learning students. This is also one of the significant causes of low online class attendance. The research into the test results revealed a high average score for the distance learning students. Consequently, these figures were compared with the results of the state final exam, allowing to identify significant problems related to the degree of control. Therefore, it is necessary to make fundamental changes in the distance education by means of a special software, and open source e-learning platforms.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Olga V. Borisova is PhD, Associate Professor of Financial University under the Government of the Russian Federation, Moscow, Russia.

Dinara G. Vasbieva is PhD, Associate Professor of Financial University under the Government of the Russian Federation, Moscow, Russia.

Natalya I. Malykh is PhD, Associate Professor of the Russian Presidential Academy of National Economy and Public Administration (RANEPA); Institute of Public Administration and Management (IPAM), Moscow, Russia.

Sergey A. Vasnev is PhD, Associate Professor of the Russian Presidential Academy of National Economy and Public Administration (RANEPA); Institute of Public Administration and Management (IPAM), Moscow, Russia.

Jana Bírová is PhD, Comenius University in Bratislava, Slovakia.

References

- Borisova, O. V. (2014) *Development trend of global economy and educational potential*. Moscow: Sputnik. 156p.
- Borisova, O. V. & Klimova, I. I. (2015) *Innovative methods and models of training students majoring in Finance and Economics*. Moscow: VividArt. 174p.
- Fatkhutdinov, R. A. (2008) *Innovative management*. St.Petersburg: Piter. 448p.
- Gryaznova A. G. (2004) *Finance and credit encyclopedia*. Moscow: Finances and statistics. 1068p.
- Kokurin, D. I. (2001) *Innovative activities*. Moscow: INFRA-M. 368p .
- Maksimov, P. V. (2012) Increasing the effectiveness of distance learning in technical colleges. *Modern problems of science and education*, 3, 189-190.
- Mukhina, T. G. (2013) *Active and interactive educational technology in high school*. Nizhny Novgorod: NNGASU. 76p.
- Raizberg, B. A., Lozovsky, E. B. & Starodubtsev L. S. (2006) *Modern Dictionary of Economics*. Moscow: INFRA-M. 495p.
- Smolkin, A. M. (1991) *Methods of active learning*. Moscow: Higher School. 176p.
- The concept of innovation policy in the Russian Federation. (1998) The concept of innovation policy in the Russian Federation for 1998 – 2000, approved by the Government of the Russian Federation of July 24, 1998, N832. Direct access: www.consultant.ru.
- Utkin, E. A., Morozov, G. & Morozova, N. I. (1996) *Innovative management*. Moscow: Akalis. 207p.
- Vasbieva, D. G. & Klimova, I. I. (2015) Transformational potential of blended learning to personalize foreign language teaching in a non-linguistic higher school. *XLinguae*, 8(1), 2-10.
- Vasbieva, D. G. & Kalugina, O. A. (2016) An Analysis of Students' Intercultural Competence Levels in a Non-Linguistic Higher School. *XLinguae*, 9(3), 58-69.