Lecture-Effectiveness Of Independent Work In Higher Education Of Trainees

Zhanna V. Smirnova∗1, Marina L. Gruzdeva2, Zhanna V. Chaykina3, Maria V. Mukhina4, Olga V. Katkova5, Denis S. Kostylev6

1,2,3,4,5 Nizhny Novgorod State Pedagogical University named after K. Minin, Russian Federation
Institute of Food Technology and Design - a branch of the Nizhny Novgorod State Engineering and Economic University, Russian Federation

*Corresponding author : Zhanna V. Smirnova*
Ul’yanova str., N. Novgorod, 603950, Russian Federation
April 2, 2018

Abstract

The article is devoted to the introduction of classroom self-study in the learning process of students in high school. An example of self-organization of classroom work in high school, the conditions for its implementation are identified and the main criteria for evaluating the effectiveness of classroom self-study. The article deals with the main stages of organization and preparation of classroom self-study. The experience of the implementation of classroom individual work in the Nizhny Novgorod State Pedagogical University named after K. Minin, as part of the modernization program of teacher education in the university. In the course of the experimental data the conclusion about the effectiveness of classroom implementation of independent work of students in the educational process of the university.
1 Introduction

Modern education prescribes new rules for organizing of educational process of trainees in the higher education structure. The content of modern educational standards FSES HE (The Federal State Educational Standards of Higher Education) offering us various forms and methods of conduct and organization of the educational process. The basic tendency in the new standards is reducing teaching load for students and increasing independent work of the preparation of bachelors in higher educational institutions.

According to previous generation standard SES HE (The State Educational Standards of Higher Education) (Gruzdeva&Svinukhova, 2013) the organization of educational process characterized the maximum amount of teaching load as 54 hours a week, theoretical studies makes 27 hours per week. The FSES PHE standards (The Federal State Educational Standards of Professional Higher Education) (Smirnova&Kutepova, 2015) have the same standard time, indicating that the lectures may not exceed 40% of the classroom work. The standards of FSES HE generation (Smirnova&Mukhina, 2016) have advantages, which characterized by the fact that they are not regulated by the amount of teaching load of students, while maintaining the 40% rate of the lectures course of total classroom work. However, the FSES 3+ standards are not regulated by the amount of hours by the classroom work and introduces the concept of “contact work with the teacher.” According to the norms of that standard, the contact work with the teacher is supposed to allocate at least 40% of the hours set aside for the implementation of the block of disciplines (Smirnova&Parshyna, 2016).

The lecturer work on the concept of “contact work” is not disclosed in the text of the standard draft. It can be considered at the discretion of the content of the learning process as a whole, and can also include the work in an electronic learning environment together with the teaching and other activities.

Thus, the student is invited to independent work as 60% of the time. Besides, the passage from specialists to bachelors preparation has led to a reduction training period by 20% without compromising the requirements for graduation, and it also increases the amount of independent work of students.

That kind of educational process substantiated by development...
of information and communication technologies, the establishment of e-learning environments in the universities, improving methodological approaches to student teaching.

The role of the teacher in the educational process also has some changes in the framework of educational development and maintenance of electronic materials for independent work in the classroom learning of student.

2 Material And Methods

As part of the modernization program of teacher education 2015-2016 academic year in the Nizhny Novgorod State Pedagogical University named after K. Minin started the implementation of the classroom independent work of students in the educational process of the university.

The purpose of the organization of classroom self-study project in high school are an ensuring high performance in full development of the basic professional educational program (hereinafter as BPEP) and successive formation of competencies of effective independent professional (practical and scientific-theoretical) activity. That understood as the ability to apply knowledge, skills and personal qualities to be successful in a particular field, including the formation of general educational activities (according to Yu.K. Babanskyi (1989)), including:

- organization  the ability to goals and objectives setting in the implementation of independent work; the planning and carry out independent work in a timely manner; the organize the necessary conditions at the workplace; to cooperate in solving educational problems, individually and group tasks performing; exercise self-control and self-analysis of educational activity;
- informational the ability to work with educational information sources, searching and using of the reference and additional sources; the possess the required level of information and communication technologies; the selecting and grouping of information according to given topic; make plans and create texts of various types; perform reproductive tasks using according to instructional materials;
- educational and intellectual activities the ability to independently carry out the analysis, connection, synthesis of information
and other forms of intellectual operations; to choose the means and methods of solving problems, both with work performing; to provide a detailed answer with substantiation and explanation their position; to perform independent work as training-research and design tasks for allowing new information, both with presentation the results of independent work.

The achievement of these objectives contributes to the following main objectives:

- ensuring the unity and continuity of the educational process at all stages of its implementation;
- creation of conditions for the formation of students’ self-study, research and practice skills;
- creation of conditions for the formation of students’ self-organization and self-development skills;
- strengthening of the teachers responsible for the development of students’ self-study skills;
- improvement of the educational-methodical documentation;
- implementation of the modern technologies and teaching methods;
- active use of the modern information technologies, which provides students to develop learning material in convenient time;
- improving of the system for monitoring students work;
- modernization of the systems for course and graduation projects design.

The Nizhny Novgorod State Pedagogical University has done a lot of work on this project. It was develop new standards curricula based on system of independent work. The number of hours devoted to the independent work of students is determined by the curriculum. Substantially the independent work of students defined by study programs of disciplines (modules), syllabus of courses (modules), educational and methodological complexes of courses (modules). The forms and labor content of the independent work of students for specific areas of study/specialty (branch/ specialization) are set by the curriculum and the study programs of disciplines (modules).

The technique of the independent work of students organization depends on the structure and nature of the study courses, the number of hours for study some course, the type of tasks for the independent work of students, individual capabilities of students
and conditions of educational activity. The independent work can be done individually or in groups of students depending on the purpose, scope, specific theme of that independent work, the level of complexity, and the skill level of students.

In the University established special conditions for the independent work of the students with disabilities.

The independent work specifically on their subject focus and accompanied by continuous monitoring and evaluation of its results, as well as the implementation of feedback from students. The problem of the organization of the independent work of students has over disciplinary character, so it defines the purpose like formation of self-learning and self-education, as the basis for future professional activity, which is reflected in the educational standard of the teacher (Smirnova&Mukhina, 2016). Professional teacher standards indicated to the need for the formation of general educational activities (Gruzdeva&Chanchina, 2009).

For achievement of objects the organization of independent work is required a number of conditions, namely:

1. The regulatory and methodological support of the independent work of students: the presence of provisions about organization of independent work in the university, as well as the documentation accompanying the educational process in the courses (modules), including curricula, study programs of courses, disciplines syllabuses, methodological manuals for the independent work organization, etc.

2. The availability of e-learning environment, providing access to educational resources, including electronic educational-methodical complexes on the specific subject (Babanskyi, 1989; Gruzdeva&Tukenova, 2016; Professional teacher standards, 2013; Sedykh, 2011; 2013).

3. Logistical support management of independent work should include the full range of training tools required to achieve the objectives, including: the availability of the classroom fund, computer labs with Internet access, seats in the reading rooms of the library and custom centers, etc.

The teachers of the university have developed a new form of self-study content syllabus of course. Syllabus is the course/discipline plan, "Plan of Action" for the students, which can be a kind of a plan, an outline of the subject; it is designed for students with the aim to assist in the organization of its educational activity. After studying the syllabus students are given the opportunity to test
As criteria for evaluating the effectiveness of the model we have identified:
- the level of formation general studying action;
- the level of achievement of academic disciplines;
- motivation of research and teaching staff to management of students' independent work;
- motivation of students for independent work;
- the reflection of students.

3 Results And Discussions

Launched a project to organize classroom self-study was conducted in the second semester of 2015-2016 academic year at the Nizhny Novgorod State Pedagogical University named after K. Minin.

It was proposed and tested new forms of independent work of students, along with extracurricular activities of independent work carried out in the form of classroom self-study under the guidance of lecturer. In the form of classroom self-study was conducted over seventy sessions. Most of the sessions were conducted with the use of active learning methods: simulation games, the use of case tasks, small group work, etc.

The project validation was attended by students of the experimental and control groups from the specialty 44.03.05. Pedagogy education, branches: Technology and Economics; History and Social studies. It was attended thirty-three students of experimental and twenty-nine students of the control group, both with more than 25 lectures of the University.

As a result, the following testing results were obtained for selected evaluation criteria.

Assessing the level of formation of general educational activities carried by the teachers on the following criteria:
- Level 0 - student does not own the action or did not start to perform those actions;
- Level 1 - inability to self-implementation of the action;
- Level 2 - student quite freely performs an action after consultation and corrective actions of the teacher or tutor;
- Level 3 independent performing of any action, an objective assessment of their own achievements.

The results of students’ level distribution of formation of general educational activities are presented in Figure 1.

During processing of project have been developed questionnaire for the teachers and students, which defined the importance of independent work in the University.

Analysis of teachers and students preferences regarding to the forms, methods and means of self-study showed that:
- teachers and students prefer individual and group forms of independent work;
- they consider that appropriate to make an independent study of issues related to the depth study of specific questions, as well as makes it possible to project and research activities;
- the most requested resources are: work in Moodle e-system, the Internet and electronic library systems;
- among the most effective types of tasks indicated: preparation and presentation of papers, the implementation of project tasks, perform case and test tasks;
- the most demanded classrooms for independent study are computer class, custom center and library reading room;

Figure 1. The level of students distribution according to formation of general educational activities in experimental and control groups.
- as improve the efficiency of resource management of the independent work of students identified: the teacher concentration at management of independent work.

Students noted that the most significant stimulus to carry out independent work is the importance of information for future careers and inter-educational incitements. Indicated increasing the students motivation to perform this independent work, as well as the performance index is not reduced (Figure 2).

![Pie chart showing the students' learning according to the results of examinations tests](image.png)

Figure 2. Natural Gas Demand (mmscfd)

4 Conclusion

Thus, analyzing the organization of independent work of classroom in the university, we can conclude the successful general learning skills formation of the students that allow learn content of the disciplines and to form strategies of self-study and self-development.

The results obtained evidence of the effectiveness of independent classroom work in the process of university education. The main recommendation after validation of the project is introducing this organization of educational process on independent classroom work in the university to the next 2016-2017 academic year.

References


