

ISCKMC 2020**International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»****ON SOME PECULIARITIES OF STUDENT INDEPENDENT
WORK IN CONTEMPORARY CONDITIONS**

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Abstract

Independent work of students is becoming one of the major components of the educational process at the university in contemporary conditions. The ratio of time allotted for classroom and independent work of students has changed towards an increase in the latter in the Federal State Educational Standards of new generation. The classroom load is minimized in some disciplines. The primary focus is made on student independent work. The past period of isolation of citizens during a virus pandemic made it necessary to switch to distance education in universities. Distance education is actually based on student independent work. The student must independently write short lecture notes, select the required literature, draw up a plan for presentations at seminars, solve issues of different levels of complexity, write term papers, various reports, essays, etc. Studies have shown that students, especially first year students, have virtually no independent work skills. There is a need to improve the process of student independent work. A significant factor is the teacher's readiness for such work. It is essential to develop appropriate methodical materials for all types of classes. The availability of a sufficient number of exercises and tasks with sample solutions and detailed explanations is relevant. The teacher must clearly understand the ultimate goal of this work: what knowledge, abilities and skills the student should acquire and what competencies are formed in this case. Independent work of students develops creative thinking, teaches research work, fosters responsibility for their work, and motivates to study each academic discipline.

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1. Introduction

The labor market makes special demands on university graduates in contemporary conditions. A student must acquire a set of universal and professional competencies in a relatively short period of study at the university in order to meet the requirements of employers. They have to be ready for professional growth and lifelong learning. The educational process at the university has also changed. On average, 50 % of the time is devoted to extracurricular work in the training programs and plans of new generation in accordance with Federal State Educational Standards. This leads to the fact that classroom hours for many disciplines are reduced to a minimum, while the main emphasis is on student independent work. In addition, part of the classroom time implies the independent work of students. The meaning is that the independent work of students becomes the major constitute of educational and cognitive activities at the university and contributes to the acquisition of deeper knowledge, skills and abilities corresponding to the field of future professional activity, professional formation and development of the relevant competencies of future specialists (Monaco, 2015).

Consequently, the quality of training specialists for various sectors of the economy depends on the organization and level of student independent work at the university. The significance of student independent work has increased and is also associated with a competence-based approach to training specialists. The approach designates the technology for the formation of a competence-based personality, ready for education and self-education.

It should be noted that universities switched to distance education during the isolation of citizens during a virus pandemic. The transition actually made the main emphasis on the student independent work. Searching for lectures and practical classes' material, its comprehension, putting down lecture notes, preparing for practical and seminar classes, forming conclusions, writing essays, reports, term papers require students to have certain knowledge, skills and abilities.

Leading Russian teachers and university experts during the period of a virus pandemic identified the features and disadvantages of distance education forms in the process of experimental work with distance education elements. In particular, unformed skills of independent work among first and second year students, low interest and motivation of IT students in independent subject, research, and search activities in the distance education process at home, in a student dormitory or in self I isolation/treatment centers were noted during training organization. First-year students were not ready for this work form; they faced various difficulties leading to a decrease in the learning motivation. Moreover, the experts noted the transition complexity of most of the older generation teachers working in the departments and teachers of non-IT-subject areas to a fully networked system of distance education. Basically, these are lecturers who are professionals in the system of classical audience education (for example, teachers of History, Economics, Philosophy, Ethics, Mathematics, foreign languages, etc.). The transfer of knowledge, experience and the formation of student competencies in these subjects is carried out with direct classroom contact between students and teachers (Abramian & Katasonova, 2020). This situation determined the formation of knowledge, skills and abilities of student independent work as significant from the first days of study at the university.

The issues of organizing student independent work, the development of their creative abilities at different times were discussed by A.A. Verbitskii, N.G. Dairi, E.F. Zeer, I.P. Kovalevskii, V.Ia. Liadus,

P.I. Pidkasiystyi, et al. The analysis of psychological and pedagogical literature has shown that the essence of the “independent work” concept is defined by various authors from diverse positions. Thus, Esipov (2009) defines independent work as a system of joint activities of a teacher and a student: this is work performed without the direct participation of the teacher, but due to his instructions in a specially allotted time, while students consciously strive to achieve the goal.

Sotnik (2009) believes that independent work is a process carried out by students on teacher's instructions, but performed independently; it serves to assimilate, consolidate, improve knowledge and acquire the appropriate skills and abilities constituting the content of specialist training.

According to Naumchenko (1983) independent work of students is a controlled process, mainly intended for the learning purposes (assimilation, consolidation, improvement of knowledge in the volume of university programs), and the acquisition of relevant skills and abilities that make up the content of specialist training.

Independent student work is a part of the educational process, which is a didactic means of evolving readiness for vocational education and self-education, a means of acquiring knowledge, abilities, skills and competencies corresponding to the competence model of forming a specialist in a university (Chekan, 2017).

Basic requirements for the organization of student independent work:

- awareness of the independent work goal;
- availability of skills that ensure the independent work performance;
- presence of interest (positive motivation) to perform independent work;
- maximum student activity when performing independent work, the development of cognitive abilities, initiative in decision-making, creative thinking (Dybina, 2012).

Independent work of students can take place in:

- classroom lessons (lectures, practical and seminar classes, tests, testing, etc.),
- preparation for lectures, practical and seminar classes, doing homework,
- preparation for the colloquium, testing, performance of midterm works,
- out-of-lesson time at consultations, supplementary and club classes under the guidance of a teacher, when performing individual assignments,
- writing term papers, essays, preparing a report,
- the development of scientific projects, preparation of presentations, implementation of case studies, etc.
- preparation for participation in student conferences, olympiads, professional competitions;
- participation in relevant webinars.

The organization of student independent work is a complicated and multidimensional process, which involves the formation of motivation, professional position of the future specialist, the independent work inclusion in the process of mastering the academic disciplines content, as well as the choice of control forms over the outcomes of independent work (Kotelnikova, 2014).

The role and position of the teacher is changing: a consultant for independent work in the educational process who works out an individual pedagogical route for each student. He is an assistant in the process of searching and acquiring new knowledge.

Teachers need to develop appropriate methodological support for the discipline to improve the efficiency of independent work. These can be lecture texts, a set of tasks for practical and laboratory classes, training programs for self-control, a bank of test assignments, interdisciplinary exercises and examples. This will allow organizing training at the university in such a way that the student becomes an equal participant in the educational process.

Students' independent work skills are also elaborated through participation in the work of scientific clubs when preparing and participating in various olympiads, contests. They can be disciplinary in nature for junior students, encouraging the desire to contest in professional competitions.

2. Problem Statement

An increase in the volume of hours allocated for student independent work enhances its significance in forming a professional personality. The approach requires variations in the educational process, creating conditions for the development and realization of each student personality in the ability formation to study independently. The problem arises in activating the independent practice of students, extending their abilities to master new knowledge, which leads to a change in the content of student independent work.

3. Research Questions

It is indispensable to define major directions of the organization of student independent work to master relevant competencies.

1. To determine the main factors and pedagogical conditions affecting the success of student independent work.
2. To designate the level of teachers readiness to organize student independent work.

4. Purpose of the Study

The purpose of the paper is to theoretically substantiate and identify pedagogical conditions conducive to the successful mastering of skills and abilities of independent work by students to acquire the required competencies.

5. Research Methods

The methodological basis of the research was formed by theoretical and empirical methods. Theoretical methods include analysis of scientific papers on the research problem, synthesis and generalization of the obtained data; analysis of the existing experience of organizing student independent work. Empirical methods imply conducting a pedagogical experiment, processing the acquired results, mathematical and statistical treatment of experimental data.

6. Findings

The research outcomes indicated that the majority of first-year students do not have independent work skills. This fact affects their current academic performance. The majority of students (approximately 40 %) of all study courses spend 2–3 hours a day on extracurricular independent work. The pedagogical problem arises in the availability of means for each subject to help students plan, organize and carry out their independent work, and form general skills and abilities of independent activity. The content of student independent work should have a professionally oriented focus, differentiation, and control by the teacher.

Consider the process of implementing the pedagogical route of student independent work of economic specialties in the study of mathematics as an example. Mathematics, as a rule, is studied in the first year of studying in these specialties. The abstractness of the expounded theorems and statements does not always arouse the interest of students in lectures. Doing homework independently, according to the sample, is not a motivating factor for learning. The level of the proposed abstraction is a complicated test for yesterday's schoolchildren. The author has worked out a comprehensive program for the mathematics study by economic specialties students to form concern in the subject and motivation for the joint and independent work. We consider practical classes as an example. The author has developed a system of economic tasks for all studied sections of Mathematics: linear algebra, matrix algebra, differential and integral calculus, theory of series, differential equations. The proposed exercises and tasks are as close as possible to the field of future professional activities of students in terms of topics and focus. Students will encounter such challenges both in their further studies at a higher education institution and in their professional activities. Tasks form knowledge, abilities and skills to fill abstract mathematical constructions with specific economic content, find the optimal solution. They force students to consider various points of view, analyze, reason, and create conditions for discussions in the student audience (Monaco, 2020). Students are offered assignments for self-compilation of some types of simple professional tasks.

The successful outcome of the performed work is the following interesting fact. Students studying in the "Management" specialty, leaving for practice in the first year, come up with and design tasks and exercises in accordance with the place of practice, without having a special assignment. The professional personality is formed, thought activity is stimulated, and favorable conditions for classroom and extracurricular work are created. Besides, we have applied technologies for conducting binary classes, as well as a method for solving cross-cutting examples.

This approach has significantly enlarged the motivational factor of learning. Students began to attend clubs, engage in research activities. Their participation in professional contests and olympiads has ceased to be formal, as evidenced by prizes and awards for their achievements. They acquired the essential knowledge, skills and abilities for successful independent work.

7. Conclusion

Therefore, the student independent work at the university is one of the most significant pedagogical issues in the theory and practice of higher education pedagogy. As the experience of our

work has shown, it is necessary to consolidate the efforts of students and teachers for the successful organization of student independent work. Significant tasks for teachers are the following:

- development of methodological support for all taught courses. They can be in print, electronic, animation formats;
- working out of guidelines for all practical exercises. Availability of a sufficient number of examples and tasks with sample solutions and detailed explanations;
- creation of interdisciplinary assignments for independent work, including solutions to cross-cutting examples and issues;
- using the opportunities for student active participation in extracurricular activities;
- elaboration of students' creative independence, which is realized through participation in various professional conferences, competitions, olympiads.

Application of the capabilities of contemporary information and communication technologies by teachers when organizing student independent work can significantly enhance the motivational factor of learning. The use of network tools, web-quests strengthens the interdisciplinarity principle of the studied courses. The process is especially substantial in the current conditions of a virus pandemic. The teaching process is changing in the conditions of distance education, the time for independent work of students significantly increases. The student has to write short lecture notes, select the required literature, draw up a plan for presentations at seminars, write term papers, various reports, essays, etc.

In these conditions, the main priority is not the number of allotted hours, but the acquisition and development of the requisite knowledge with their further assessment and confirmation of the acquired skills and abilities of students.

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